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ABSTRACT

This collection of papers includes: "Introduction: Why Should We Discuss 'Urban Literacy' in Developmental Education?" (Dana Britt Lundell and Jeanne L. Higbee); "History of the Center for Research on Developmental Education and Urban Literacy: 1996-2002" (Dana Britt Lundell); "The Traveling City: The Hudson's Store, Urban Literacy, and Access in Detroit, Michigan" (Valerie Kinloch); "Race and the Politics of Developmental Education: The Black Student Take-Over of Morrill Hall" (David V. Taylor); "Changing Objects to Subjects: Transgressing Normative Service Learning Approaches" (Heidi Lasley Barajas); "Science Education and the Urban Achievement Gap" (Randy Moore); "Saving the 'False Negatives': Intelligence Tests, the SAT, and Developmental Education" (Randy Moore, Murray Jensen, Leon Hsu, and Jay Hatch); "Enhancing Literacy through the Application of Universal Instructional Design: The Curriculum Transformation and Disability (CTAD) Project" (Judith Fox and Jeanne L. Higbee); "Reflections: Experience Commentaries by Urban Developmental Studies Students (Reprint from 1997 NADE Monograph)" (Maria Valeri-Gold, Carol A. Callahan, Mary P. Deming, and M. Tony Mangram); "Developmental College Students' Negotiation of Social Practices between Peer, Family, Workplace, and University Worlds" (Richard Beach, Dana Britt Lundell, and Hyang-Jin Jung); and "African American Men from Hennepin County at the University of Minnesota, 1994-98: Who Applies, Who is Accepted, Who Attends?" (David Taylor, Bruce Schelske, Jennifer Hatfield, and Dana Britt Lundell). (SM)

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The Center for Research
on Developmental Education and Urban Literacy

Exploring Urban Literacy & Developmental Education

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Dana Britt Lundell
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Exploring Urban Literacy & Developmental Education

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Dana Britt Lundell
Jeanne L. Higbee
Editors

Holly Choon Hyang Pettman
Devjani Banerjee-Stevens
Jennifer Kreml
Assistant Editors

Karen A. Bencke
Cover Design & Layout

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Introduction: Why Should We Discuss "Urban Literacy" in Developmental Education?

Dana Britt Lundell
Jeanne L. Higbee
Center for Research on Developmental Education and Urban Literacy
General College, University of Minnesota

In June 2002, the Center for Research on Developmental Education and Urban Literacy (CRDEUL) celebrated its six-year anniversary at the University of Minnesota-General College. As a means of honoring the first years of the Center's existence, we developed the theme for this monograph, "Urban Literacy and Developmental Education," as a way to articulate a concept of access for developmental education programs that includes a focus on issues impacting students who come from, or enter higher education in, urban settings. It is important to recognize, reflect on, and continue to do research that further describes the nature of these students' social worlds, academic learning environments, and cultural backgrounds that shape their own perceptions of what "college" really is and what it means for them to pursue higher education. As researchers, advisors, and teachers, we must also consider our own role in creating learning opportunities that both engage and challenge the range of activities and cultures in which students live.

For the field of developmental education, it is crucial that we begin to address the interaction of students' worlds at the level of research and practice. For example, the concept of "urban literacy" describes a way to expand traditional conversations in the field by placing this work in more specific, local contexts—asking and pursuing questions that arise from and are particular to each site where we and our students work and learn. By defining the term "literacy" as the ways students think and navigate between and across their worlds, the definition becomes more broad than traditional reading, writing, or skills development. We can further develop definitions and models of developmental education by more centrally addressing issues of access, including different kinds of literacies as they relate to students' gaining of access to social, academic, political, and economic worlds beyond the institution. Specifically, this notion includes a focus on contradictions that are inherently part of this developmental process, something that may not be overtly addressed in a traditional curriculum or subject matter. For example, why is pursuing higher education itself a personal contradiction or outright struggle for some students? Why are these same activities less rocky and more congruent for other students? Issues of class, race, ethnicity, culture, disability, language, and gender are some of the factors that influence how students and their instructors create meaning out of the assignments in their classrooms and workplace settings. How can classroom spaces invite all students inside while simultaneously acknowledging and encouraging these variations in personal experience as a means for more active critical thinking and engagement with institutions of higher education? Finally, what do students themselves say about their experiences in higher education, and what role do they see developmental programs playing in their transition?

These questions that are relevant both to research and practice help us to identify some ways to examine these themes and further develop the notion of "urban literacy" as part of the developmental education continuum. In this monograph, several authors have written about these themes from their own vantage points in theory and practice—across disciplines such as sociology and biology, from within different programs such as a research center or professional development grant, and through varying research and teaching methodologies such as service learning and qualitative research.

The monograph begins with Lundell's piece describing the "History of the Development of the Center for Research on Developmental Education and Urban Literacy: 1996-2002," which discusses a new center doing work on access issues for higher education. In "The Traveling City: The Hudson's Store, Urban Literacy, and Access in Detroit, Michigan," Kinloch uses the demolition of the downtown Hudson's store as a metaphor for the erosion, or to use her term "implosion," of education in the inner city. Taylor's piece titled "Race and the Politics of Developmental Education: The Black Student Take-over of Morrill Hall" defines the ways in which students worked in the 1960s at an urban campus to redefine higher education to include students of color, a history that is still relevant today across the nation as we continue to define notions of access at the university. Barajas' article on "Changing Objects to Subjects: Transgressing Normative Service Learning Approaches" addresses pedagogical questions about the ways students and their communities can engage one another through civic engagement activities. Another vantage point is revealed in Moore's piece "Science Education and the Urban Achievement Gap," focusing on why issues of access and developmental education are still critically important for the science community. Moore, Jensen, Hsu, and Hatch continue to develop raging debates over the problems of access, discrimination, and test scores in "Saving the 'False Negatives': Intelligence Tests, the SAT, and Developmental Education." Fox and Higbee's piece "Enhancing Literacy Through the Application of Universal Instructional Design: The Curriculum Transformation and Disability (CTAD) Project" discusses how a model developed as a more inclusive approach to serving students with disabilities can improve access and retention for all students.

The monograph also includes three important pieces of research defining urban literacy issues for students in developmental education. First, we have reprinted a qualitative article by Valeri-Gold, Callahan, Deming, and Mangram titled "Reflections: Experience Commentaries by Urban Developmental Studies Students." This kind of qualitative research, specifically that which describes students' transition experiences from their standpoint, is critical to understanding what students want and need in higher education programs. Similarly, Beach, Lundell, and Jung's article "Developmental College Students' Negotiation of Social Practices Between Peer, Family, Workplace, and University Worlds" further defines the social and academic literacies that students negotiate as they make the transition from high school to higher education through a developmental college of an urban university. Finally, a research report from CRDEUL addresses access issues and experiences for African American males, as discussed in Taylor, Schelske, Hatfield, and Lundell's "African American Men from Hennepin County at the University of Minnesota, 1994-98: Who Applies, Who is Accepted, Who Attends?"

For making this monograph possible, the Editors want to express their thanks to David Taylor, Dean, and Terence Collins, Director of Academic Affairs, at the General College, University of Minnesota, for continuing to support the Center and its publications. We also thank our Assistant Editors, Holly Choon Hyang Pettman, Devjani Banerjee-Stevens, and Jennifer Kreml. Karen Bencke from General College Technical Support Services continues to help us immensely with layout, cover design, formatting, and printing. We also thank all the authors who contributed to this monograph and the editorial board members who support this publication.

History of the Center for Research on Developmental Education and Urban Literacy: 1996-2002

Dana Britt Lundell, Director
Center for Research on Developmental Education and Urban Literacy
General College, University of Minnesota

This chapter provides a brief history of the development of the Center for Research on Developmental Education and Urban Literacy (CRDEUL), General College, University of Minnesota. In June 1996, the Center established itself as a local, regional, and national presence in the field for the development and promotion of postsecondary developmental education and urban literacy issues in higher education. CRDEUL's current programs include publications, national meetings, visiting scholars, a resource library, grants development, and a variety of initiatives that encourage multidisciplinary perspectives and future directions for developmental education. Its unique research focus on urban literacy additionally promotes the examination of access and literacy issues for students in urban settings who are making the transition to higher education through postsecondary developmental education programs. By emphasizing the intersection of developmental education and urban literacy in its mission, CRDEUL offers a new perspective for researchers and practitioners interested in access research.

The Center for Research on Developmental Education and Urban Literacy (CRDEUL) was established in June 1996 and recently celebrated its sixth anniversary in the General College (GC), University of Minnesota-Twin Cities. Although the Center is relatively new in the field of postsecondary developmental education, it is situated in General College, which is one of the oldest developmental education programs in the country. Additionally, CRDEUL's location within the University of Minnesota, the only Big Ten public research institution situated in its state's major urban site, has been influential in extending the University's outreach within and beyond the metropolitan area, actively promoting access research, professional development, and innovative curricular initiatives. The establishment of CRDEUL within the General College has also been a catalyst for the formation of significant research partnerships among faculty and staff across institutions. At this point, it is important to outline the history of the Center to celebrate and highlight its present goals and future programs, particularly in the unique areas of urban literacy and access research.

Presently CRDEUL, in partnership with GC, has the following mission:

> The Center for Research on Developmental Education and Urban Literacy promotes and develops multidisciplinary research, theory, and practice in postsecondary developmental education and urban literacy. The Center identifies future directions in the field locally, regionally, and nationally by bringing together faculty, students, and community organizations for research and professional development.

It is housed in 333 Appleby Hall, General College, on the East Bank campus of the University of Minnesota and features a variety of programs relevant to a regional and national audience. Its present mission statement continues to evolve, emphasizing the importance of access research for all students and instructors in higher education.

The Center's history and presence at the University of Minnesota are marked by three phases—the local

planning and start-up (1996–1998), regional implementation (1998–2000), and national implementation (2000–present). During this time, CRDEUL established its current mission, developed its programs, assembled an Advisory Board, and positively expanded its local, regional, and national presence in the field. CRDEUL has additionally gained a high level of visibility in a variety of national professional organizations with its commitment to interdisciplinary research in postsecondary developmental education and urban literacy.

Phase One (1996-1998): Local Planning and Start-Up

In its first two years of pilot funding (1996–1998), the Center was founded as a collaboration among faculty, graduate students, and staff in the General College, the College of Education and Human Development, and the University's Office for Students with Disabilities. Its primary funding source for this phase was a small, formative grant ($10,000 per year) from the University's Graduate School through the Program for the Support of Interdisciplinary Research and Postbaccalaureate Education. During this phase, the Center established a broad base of local and regional affiliates, launched a web site, hosted monthly research forums, conducted collaborative grant writing activities, initiated a longitudinal qualitative research study in General College, and sponsored the first Visiting Scholar, Dr. Shirley Brice Heath, an expert on language research and literacy education. The successful activities of the planning phase helped establish the Center as a viable and visible resource in the University for promoting, defining, and developing new research in developmental education and urban literacy.

Phase Two (1998–2000): Regional Implementation

As a result of the successes achieved in phase one, the Center received a continuation grant for full funding to expand its presence and programs at the regional level. Phase two (1998–2000) was supported by a larger annual grant ($50,000) from the Graduate School, with additional support from General College. During this phase, CRDEUL successfully continued to promote the visibility of its work at the local and regional levels. The Center also began to expand its mission to make this work more highly visible at the national level. For example, the Center hosted the first Intentional Meeting on Future Directions in Developmental Education in October 1999. This forged important national collaborations and resulted in a nationally distributed proceedings outlining the field's future theory and research.

Phase Three (2000–Present): National Implementation

The Center, having surpassed its founding goals in the first two phases, received an internal monetary commitment from the Dean of General College to sustain its future work with ambitious expansion goals set for the Center's increased presence at the national level. Phasing out the Graduate School's external funding, General College became the Center's primary funding source with an annual budget to sustain present initiatives, program development, and a staff including a full-time Director, a full-time Program Associate, and a part-time Faculty Chair. This phase also provided support for starting an in-house resource center in General College.

In addition to the continuation of past programs, new developments in the Center during this phase have included launching an annual monograph series, hosting a second and third national Meeting on Future Directions in Developmental Education (April 2001 and November 2002), developing an in-house resource research library and online reference database, writing grants for national research, supporting a Visiting Scholar Program (featuring Dr. James A. Banks, Professor and Director of the Center for Multicultural Education, University of Washington-Seattle, in May 2001), funding annual research Mini Grants and the Henry Borow Award for graduate student doctoral research, updating a web site (http://www.gen.umn.edu/research/crdeul), and founding an Advisory Board with regional and national members. Ongoing work in this phase has included grant development and research studies, such as the Multicultural Awareness Project for Institutional Transformation (MAP-IT) Survey and the qualitative General College student study, "Developmental College Students' Negotiation of Social Practices Between Peer, Family, Workplace, and University Worlds."

CRDEUL Programs

The Center's agenda includes a range of ongoing programs that continue to evolve in response to its current base of affiliates and feedback from Advisory Board members.

Visiting Scholar

CRDEUL sponsors a Visiting Scholar featuring a national scholar with expertise on issues in developmental education and urban literacy. The program includes a free public lecture, public roundtable discussion, and related workshop activities to encourage and develop regional work by faculty, students, and staff.

Meeting on Future Directions in Developmental Education

Two national meetings, and a third one occurring in November 2002, have been hosted by CRDEUL to stimulate the thinking of national leaders related to future directions in the field of postsecondary developmental education. These meetings include representatives from major developmental education professional organizations and editors of related publications, as well as scholars with extensive research backgrounds in the areas of access and higher education. Topics include policy, grants, future research, best practices, professional development, multicultural education, and collaborations. Proceedings are available on the CRDEUL web site (http://www.gen.umn.edu/research/crdeul/publications.htm).

Publications

The Center publishes an annual monograph related to specific themes in postsecondary developmental education. The first two monographs, *Theoretical Perspectives for Developmental Education* (Lundell & Higbee, 2001) and *Histories of Developmental Education* (Lundell & Higbee, 2002b), are the direct result of issues raised at the Future Directions Meetings. The third monograph is titled *Exploring Urban Literacy and Developmental Education* (Lundell & Higbee, 2002a). Additionally, the Center publishes occasional research reports (e.g., Taylor, Schelske, Hatfield, & Lundell, 2002) and proceedings from the Future Directions meetings (Lundell & Higbee, 2000, 2002c). Calls for submissions and downloadable copies of all CRDEUL publications are available on the web site.

Resource Center

CRDEUL's main office in General College has developed a resource center available to the General College community. The library includes academic journals, books, reports, and newsletters. The resource library also includes a bulletin board with related publications, conferences, and events.

Forums

During the academic year, the Center hosts free forums on research and practice in postsecondary developmental education and urban literacy. Projects by faculty, staff, students, and community groups are featured in these forums, including information related to research publication in the field. Past forums have included such topics as: "Writing in APA Style for Research and Publication in Developmental Education," "African American Men Research Project at the University of Minnesota," and "Student Perspectives on Disability and Higher Education."

Grants and Awards

The research center develops and supports grant activities related to research in developmental education and urban literacy. The annual Henry Borow Award supports outstanding graduate student dissertation research by granting $1000 to one student per year. The Mini Grants program also offers annual monetary awards for faculty and staff research proposals, providing a maximum of four awards of up to $1500 each per year. Recently funded Mini Grants include the following topics: assessing English proficiency levels of Sudanese Lost Boys residing in the Fargo-Moorhead, Minnesota area; qualitative study on oral histories of developmental education and learning assistance professionals; and assessing literacy levels of students in a Reading Seminar curriculum designed for attaining the GED. The Center also develops grants for future research in the field and currently co-sponsors the Curriculum Transformation and Disability (CTAD) project in General College (http://www.gen.umn.edu/research/ctad/default.htm).

Web Site

The Center's web site (http://www.gen.umn.edu/research/crdeul) highlights current information and archives from past programs, including events, publications, grants and awards, resources, and professional development.

Staff and Advisory Board

Since its inception, Dana Britt Lundell, Ph.D., has been CRDEUL's primary Coordinator and in January 2000 became the full-time Director. Since 1999, Jeanne L. Higbee, Professor of Developmental Education in GC, has served as Faculty Chair. Drs. Lundell and Higbee are also Co-Editors of the CRDEUL monograph series. Holly Choon Hyang Pettman is the Program Associate. The Center initially formed an Advisory Board to provide consultation and research expertise, including several Founding Advisory Board members of the Center from 1996–2000: Terence Collins, Fred Amram, Robin Murie, Richard Beach, and Rosemarie Park. Presently Board members include four individuals from General College, two from regional community colleges, and three representing national programs.

Urban Literacy Research

In addition to its commitment to developmental education, an important aspect of the Center's mission includes a focus on "urban literacy," a term that encompasses a range of access issues relevant to students entering higher education within primarily urban settings, including workforce transition, disability, race, ethnicity, gender, first-generation, language, and socioeconomic issues. Tne term "literacy" is used here broadly to expand the focus of postsecondary developmental education research to include social and cultural factors as part of the dialogue around students' educational transitions. For example, students' learning of new "Discourses" (Gee, 1996; Lundell & Collins, 1999; Reynolds, 2001) in college includes more than traditional skills development and disciplinary-related academic learning. This notion includes gaining a type of cross-cultural understanding and a set of tools for navigating academic institutions for all students—a kind of academic literacy that ties skills and disciplinary learning more closely to social, political, cultural, and personal domains (Phelan, Davidson, & Yu, 1998). Central to this is also the work of multicultural education (Banks & Banks, 2001; Banks et al., 2001), which is highly relevant for higher education and access research as well because it addresses issues of diversity across the continuum of education from K-12 to higher education.

Ultimately, the Center's emphasis is holistically related to promoting access research as a way to define and further develop overlapping areas for developmental education, urban education, and academic literacy. By centrally addressing the work and definitions of developmental educators (National Association for Developmental Education, 1995) and by promoting further theoretical development in the field (Lundell & Higbee, 2001), CRDEUL's mission has developed in response to multidisciplinary initiatives that will enhance student learning and access programs.

Future Work in the Center

In addition to the continued development of the Center's ongoing programs, CRDEUL's future plans to develop its presence as a national leader in the field include pursuing grants for regional and national research; continuing work from the Future Directions in Developmental Education meetings; and providing professional development for faculty, staff, and students pursuing developmental education and urban literacy research and practice. As the Center celebrates its sixth year at the University of Minnesota, General College, we continue to pursue productive collaborations across institutions that result in enhanced access and excellence for all students transitioning to higher education.

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The Traveling City: The Hudson's Store, Urban Literacy, and Access in Detroit, Michigan

Valerie Kinloch, Ph.D.
Department of English, University of Houston-Downtown

This chapter examines how theories of literacy and writing often work to exclude discussions of the rhetorical practices of public space. The author draws on Gregory Clark's (1998) metaphor of writing as travel from his article, "Writing as Travel, or Rhetoric on the Road," to explore how public spaces like the imploded Hudson's Department Store in Detroit, Michigan, are socially produced to be restricted in use and access, specifically to people of color. The goal of this chapter is to examine space and its politics as travel in relation to writing instruction and the literacy practices of students who live in and are products of such spaces.

In his recent article in *College Composition and Communication* titled "Writing as Travel, or Rhetoric on the Road," Gregory Clark (1998) challenges our assumptions that writing instruction, or composition studies in general, is ubiquitous, or universal, in its effort to establish discursive group collectivity. He challenges these assumptions by addressing our understanding and use of terms like public sphere, discourse community, and public participation, terms that question issues of territorialism. "Writing as Travel" highlights how composition studies as a discipline, English studies more specifically, has used such terms to define writing as rhetorical when, in fact, our understanding of and engagement with these terms are enculturated with our own sense of territory and public sphere. We teach writing to enact social change so long as that change benefits our own space or discourse community: we have developed "a critique of the general notion of a public sphere that provides the implicit blueprint we have used to build our concept of discourse community. And that concept is fundamentally territorial" (Clark, p. 10).

In his call for a "discursive collectivity" (Clark, 1998, p. 12) established through rhetorical interaction within and then across demarcated boundaries, Clark contributes to a "territorial" and "spatial" study of composition by asking us to re-imagine the profession from being rhetorically territorial (i.e., fixated, limited, bounded) to being expansive, public, and boundless, essentially a space that travels through the experiences of writing. He illustrates how writing travels "by exploring the possibility of locating the kinds of collectivities that are formed by interacting writers and readers in a concept of expansive space through which, in their interactions, they travel" (p. 12). Clark uses the process of writing and the experiences of student writers to expound upon historical commentaries of writing as enacting social change (Cushman, 1996; Dewey, 1916; Foucault, 1972, 1980) across discourse communities, outside of classrooms, and within public spheres deemed, by Mary Louise Pratt (1991), as "contact zones" (p. 37). The process and experiences of writing allow scholars to witness how writing travels through and between different spaces for different people, and this is important because writing as a process that travels between and beyond territorial spaces is a primary function of the work of composition and writing instruction: to teach students how to read and write, according to Clark, "as if they were embedded in an expansive social space where they must confront and account for relationships of agency, obligation, and interdependence" (p. 23). And this is the goal of "Writing as Travel," as it should be a primary goal of composition studies: to propound an ideology of space in classrooms, communities, and research that accounts for the implicit notion of composition as universal by taking into consideration how space constitutes individual and group differences that inevitably get ignored in our work and thus in the work of our students.

I participate in and extend Clark's (1998) discussion of "rhetorical territoriality" (p. 12), or what I call traveling space, by using concepts that describe the process of postmodern gentrification in exploring how public spaces are socially produced to be restricted in use and access, specifically for people marked "poor" or "at-risk" or "unprepared" or "remedial." Postmodern gentrification demands that we question the relationship between rhetorical practices and the material realities of those practices in understanding and confronting the dynamics of institutionalism, segregation, and suburbanization in public spheres. These dynamics contribute to a politics of space that allows me to examine gentrification as travel in three ways: by using narratives of space to investigate territorial spaces of power in the city of Detroit; to illustrate the effects of territorialism in writing instruction so as to promote writing as an act of change; and to argue for a politics of space in writing instruction that supports the public spaces where our students work and live. I do these things by examining the physical space and representational place of the J. L. Hudson's Department Store in downtown Detroit. Using Clark's metaphor of writing as travel, I show how the spatial writings of public spaces like the Hudson's store work to write out, or exclude, certain groups of people based on race, economics, and geography. The process of writing out people from the daily functions of the city based on factors deemed "material culprits" (e.g., color, gender, ethnicity, poverty) has caused the place of Detroit, according to Thomas Sugrue in *The Origins of the Urban Crisis* (1996), to be "plagued by joblessness, concentrated poverty, physical decay, and racial isolation" (p. 3). Thus, the way people tend to write about places like Detroit becomes representative of demarcated boundaries, unpoliced spaces, and battered landscapes that fit into Clark's argument of rhetorical territoriality.

I define rhetorical territorialism as a method that works to write out certain groups of people from certain spaces designated as private, or privately public. In particular, rhetorical territorialism works to promote certain spaces as privileged, certain social acts as more significant than others, and certain people as more accepted than others. Rhetorical territorialism, as Clark (1998) warns, happens everywhere; the most obvious space is inside classrooms where the writings of students are overwhelmingly monitored by teachers and writing professionals already affiliated with a discourse community, and who, for the most part, encourage students to write and experience their writings in ways that ignore writing as a social act grounded in experiential learning. As Andrea Lunsford and Lisa Ede (1996) write in their essay, "Representing Audience: 'Successful' Discourse and Disciplinary Critique," there are many territorial claims underlying the functions of writing:

> The dual moves toward exclusion and successful persuasion tend to hide from view any value that misunderstanding, resistance, or similar "failures" might have in complementing and enriching our notion of "success" by opening up spaces for additional voices, ways of understanding, conversations, and avenues of communication. (p. 174)

In their argument on the functions of writing, Lunsford and Ede (1996) identify "audience" as an apparatus of exclusion and persuasion, where exclusion has no value because it is grounded, hypothetically, in misunderstandings. Therefore, audience serves as a rhetorical agency of authority and the voice of the discourse community in which the student is awaiting affiliation; the space and location of the student are insignificant. Agreeing with Lunsford's and Ede's analysis of the social and spatial dilemmas caused by audience as it pertains to composition studies, I contend that audience is established and located in spaces of territorialism. That is, spaces of territorialism, like writing classrooms, become so demarcated with struggles over power, voice, and authority that the classroom turns into an inhibiting space, a space of constant battle over who can best replicate the instructions, ideology, and pedagogical practices of the teacher. In discussing this inhibition, it is important to note Clark's (1998) comment on the ethical issue of audience and the responsibility and representation of student writers further discussed by Lunsford and Ede. Clark's remark, "I find in this statement a call for a conception of the act of writing that prompts people to rethink the kinds of social identities they enact when they write" (p. 11), becomes lost in the battle to become a member, or the audience, of a certain space of privilege (e.g., classrooms, libraries, writing centers, conferences, cafeterias, airport terminals, shopping malls, and department stores). This same inhibition, while

defining our success or failure with student writers, occurs in public spaces of interaction. We should learn to write about and develop arguments on social issues in the writing classroom; we should be allowed to experience our various social identities when we write; and we should be encouraged to use our writings and arguments to promote social change in our communities. Essentially, educators

> must fulfill the task of educating citizens to take risks, to struggle for institutional and social change, and to fight for democracy and against oppression both inside and outside schools. Pedagogical empowerment necessarily goes hand in hand with social and political transformation. (Giroux, 1988, p. 202)

Yet pedagogical empowerment often gets paired with spatial privilege where many teachers preach, "I am the teacher, these are my beliefs, and this is my classroom."

The University and Geography

In "Importing Composition: Teaching and Researching Academic Writing Beyond North America," Muchiri, Mulamba, Myers, and Ndoloi present the argument that the relationship between the university and society is defined based on geography: universities are often separated from the rest of society, and thus, the work of the two entities appears separable. This relationship is another example of rhetorical territorialism in the sense that the space of the university, and its work, are viewed as being more privileged than the rest of society, and thus the geographical dimension between university and society does not promote Giroux's (1988) belief, "pedagogical empowerment necessarily goes hand in hand with social and political transformation" (p. 202). To establish a link between the two and to participate in a nonterritorial space of interaction, Giroux and Clark (1998) individually argue that our existing model for rhetorical culture (e.g., patterns, conventions, identities) must become transient. One way for the predominant paradigm of rhetorical culture to become transient as opposed to territorial is by bringing the work of the rest of society into our universities. Muchiri et al., as well as Cushman (1996), recognize the need to confront space as a social dynamic that defines, alters, and reshapes one's sense of belonging and level of participation in spaces deemed as unprivileged. Using Clark's argument against rhetorical territorialism and Muchiri et al.'s and Cushman's belief that space affects one's sense of belonging, I believe the writing classroom must draw upon the work of the rest of society by using narratives of space to locate a rhetorical culture that privileges, as opposed to alters, location and levels of literacy and literacy acts in and out of classrooms. I do this by first providing a narrative of the recently imploded Hudson's Department Store in downtown Detroit, a historic landmark and an implosion that represent rhetorical territorialism, geographical authority, and spatial decay.

The Narrative

Saturday morning, October 24, 1998 was a day in the life of Detroit's history that many people will probably not forget. It was all over the news and on radio programs: "Today, the J. L. Hudson's Department Store in downtown Detroit will be imploded." After years of abandonment, the city of Detroit decided to remove the age-old structure and begin the city's revitalization process again. By imploding the Hudson's Department Store, city officials rationalized that new space would become available to build and nurture profitable businesses in downtown Detroit. This meant that the old space of the Hudson's store, known for its days of glamour and for its reasonably priced clothes, hats, toys, and appliances, would be replaced by Campus Martius, a 1000 square foot structure with restaurants, stores, corporate offices, and a hotel. It is imagined that downtown Detroit will once again be a city of ingenuity, creativity, and public recognition.

Campus Martius, the magnificently designed structure to eventually exist in the space of the imploded Hudson's store, is where the reawakening of downtown space will occur. In the heart of downtown, adjacent to Bank One's local headquarters, blocks away from the Renaissance Center in one direction and State Theatre, the Fox Theatre, and the new Tiger Stadium in the other direction, Campus Martius is intended to revitalize Detroit. Despite the surrounding neighborhoods, the homeless people standing, sitting, and sleeping at the bus stops, and the lack of a proper and sufficient transit system, Detroit is said to be returning to its 1920s position: a city of global recognition and financial success where civic life reigned high in the streets. Yet the implosion of

the Hudson's store does more for Detroit than provide new developmental space. It reopens the space of Detroit to public scrutiny by questioning the dedication of city officials and prominent investors to repair abandoned, battered, and burned neighborhoods in and around Detroit's business areas. Specifically, the implosion of the Hudson's Department Store calls into question the importance of the surrounding neighborhoods that sit in isolation to Detroit's empowerment zones, neighborhoods that sit off of Rosa Parks Boulevard, 24th and 25th Streets, and Cass Corridor, just to list a few. On one level, the implosion signifies the lack of concern for the removal and rebuilding of houses and stores that have been standing abandoned before Hudson's closure in 1980. On another level, the implosion implies where the emphasis will be placed in Detroit's gentrification process. Despite the levels and the reasons, the downtown Hudson's Department Store symbolized all that Detroit was, all that Detroit lost, and all that Detroit wants to be: public, accessible, busy, thriving, and profitable, essentially a place of global consumption. It is this characterization of Detroit as a place of consumption that establishes its rhetorical territorialism.

Detroit and its imploded Hudson's Department Store represent rhetorical territorialism by attempting to reopen old space that will be censored and monitored by economics, accessibility, and privilege. Although the actual implosion itself represented publicity (people from everywhere, regardless of race, gender, income, and social and religious beliefs, interacted in the streets of Detroit on the day of the implosion), the implosion quickly became symbolic of overly ignored attempts to erase the present conditions of Detroit in manifesting a new Detroit that nobody wants to admit mimics the old Detroit (heaps of businesses, stores, duplexes and complexes, streets cluttered with cars and buses and people, and so on). In mimicking the old, or the past, both the city and its historic Hudson's landmark exist as spaces of demarcation: we have marked spaces in the city that are abandoned and battered; we have designated certain areas as empowerment zones simply because those spaces have become overcrowded with Black people and other people of color. In the words of Clark (1998), we have developed "a critique of the general notion of a public sphere that provides the implicit blueprint we have used to build our concept of discourse community. And that concept is fundamentally territorial" (p. 10).

Clark (1998) is aware of the damage that can result from rhetorical territorialism: the exclusion of groups of people from certain spaces, the formulation of discourse communities that sit in isolation to other spaces not viewed as "communities." In terms of the space of the Hudson's Department Store, Detroit is becoming a new city with new territorial marks. For years, Detroit has been synonymous with urban decline, racial strife, and joblessness. Suddenly, according to city officials, these characterizations are vanishing in part because of the Hudson's implosion, in part because the city believes that the once vacant buildings in downtown are being renovated into lofts and galleries, and for the most part, this seems to be enough for Mayor Dennis Archer, who believes Detroit's renaissance signifies the coming back of other American cities. But what are they coming back to?

The belief that cities like Detroit are coming back was shared by many people who stood on the streets of Detroit hours before the implosion of the Hudson's Department Store on October 24, 1998. People parking their cars and walking blocks and blocks to get one last look and photograph of the Hudson's store turned into a moment of nostalgia. As I stood on the corner of Woodward Avenue and Gratiot Avenue, just having returned from Library Street where bulldozers and men in construction hats were preparing for the demise of this longstanding site, I was bombarded with more people gathering in anticipation. Men, women, and children from far and near gathered on Woodward Avenue and on neighboring streets in utter amazement of the awaited implosion. Despite the mixed feelings that people brought with them, most of the well wishers recalled the memories gained and the experiences shared inside of the 2.1 million square foot structure. In these shared experiences, the Hudson's store became an agency of rhetorical practices that animates the mind and the body by invoking a common language shared by the strangers on the streets. It was like the Hudson's store now existed on the streets of Woodward and Gratiot, for everyone began talking about the price of furniture, the furniture and articles they still owned, the crowd of Saturday morning shoppers, and the mass of people walking up and down downtown Detroit. Suddenly most of the conversations changed from the happy memories in and of the Hudson's store to the painful memories and realities brought upon by industrial closings, the riot of 1967, and, to extend the list, the closing of downtown J. L. Hudson's Department Store.

Indeed, it was amazing to see so many human bodies standing in the streets of downtown Detroit, but even more amazing was how the Hudson's implosion enabled a discourse of civility and access to occur. The Hudson's store became more than a physical structure; it became a cultural and rhetorical structure that shaped and molded how people used a common language to narrate their own experiences with the store itself. It defied the premise of rhetorical territorialism, of excluding people based on their lack of mastery of rhetorical conventions, by enabling people "to cross the many boundaries that territorial conceptions of identity and rhetoric prompt them so persistently to draw" (Clark, 1998, pp. 11-12). For me, this discourse of civility began when an elderly Black woman awaiting the implosion uttered, "the closing of Hudson's did more damage to the city's high caliber of interaction than probably anything else." Her comment opened the way for a rather interesting conversation, particularly when a White man standing next to her replied, "Closing Hudson's was painful for everyone. Although we all knew it was coming, no one wanted it. After it happened, it just seemed like that was the end of Detroit." And no one disagreed with the two commentators; instead, people began talking about "what went wrong," and "remember when Black people initially felt a sense of alienation," and "remember all the White people trying to take over a city they left."

This discourse of civility paid no tributes to race or age; it allowed people to appreciate a rather large and abandoned location, downtown Detroit, by way of making their experiences and narratives of space significant. In this discourse, rhetorical exchanges occurred through reciprocity, or in the words of Paulo Freire (1970) in *Pedagogy of the Oppressed*, "knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other" (p. 53). The people awaiting the implosion used language to express their feelings of betrayal ("I don't know why Hudson's left anyway"), animosity ("Create a city to only kill the city"), and love (". . . But we had fun, and we were able to love the fun we had"). These experiences illustrate how the curious onlookers made use of a discourse of civility to understand location, "the world," and to associate and share their experiences with other people, proving that ". . . Only through communication can human life hold meaning" (p. 58), and only through narrating the presence of the Hudson's store were people able to narrate the physical destruction of its (Hudson's) civility.

The Hudson's Building and Composition Studies

The rhetorical practices of civility implicit in the Hudson's Department Store, representing reason and desire, righteousness and hard work, diversity and error, constitute a language, a story, and a discourse that many Detroiters cannot forget. This discourse is shaped in language, and according to Freire (1970), language plays an important part in constructing our experiences in the world by allowing us "to see the world not as a static reality, but as a reality in process, in transformation" (p. 64). Yet to see the world in transformation is to be taught that the world changes, which does not readily begin in spaces of implosion like Woodward Avenue, but in classrooms conceived of as democratic public spheres (Dewey, 1910, 1916; Giroux, 1983, 1988). In classrooms, students should be taught the importance of making use of a discourse of civility by experiencing writing as an act of social change through the appreciation of their various social identities, their geographical locations, and their experiences outside of the classroom. Doing so would allow the world to be viewed, in the words of Freire, "as a reality in process, in transformation" (p. 64), as well as the act of writing itself and the diversity with which writing in the world represents. Therefore, public spaces, writing instruction, and the act of writing would come to represent the American promise of democracy: freedom of speech through reciprocity (i.e., sharing and associating), power to promote adequate change in the absence of exclusionary prowess, and the skill to practice inalienable rights in spaces of diversity such as classrooms, communities, libraries, and even in our homes.

The freedom of democracy, during the implosion of the Hudson's store, presented itself in the discourse of civility used by onlookers in a way that held no tolerance for rhetorical territorialism and spatial authority. What tends to be judged as uncivil in our daily and public interactions appeared civil on this October day in Detroit: women wearing head scarves and men begging for spare change in downtown Detroit stood next to people wearing posh clothing and

driving luxury cars. Groups of people, obviously from different locations, stood unbothered by diversity, for they were all joined by the need to narrate the space of downtown Detroit at a time when the Hudson's store represented civic pride. It was this civic pride that even forced many people to speak in protest of the Hudson's implosion, as if keeping the decayed structure would refurbish the surrounding areas that have endured decline. It was as if allowing another decade to pass without removing the abandoned structure would bring more people, homebuyers, tourists, and businesses back to downtown Detroit, and as if keeping the structure would weaken the strain of past issues with race and racism. Over 10 years of housing an abandoned structure with no definite plans for its renovations amounted to the loss of viable, economically profitable business and community space. This loss, particularly endured by the people living in and around it, has aided in the concentration of poverty and the rise in unemployment in Detroit. Since the Hudson's store closed, "other stores have either closed or moved, leaving lots of people jobless," according to a woman awaiting the implosion. In particular, the closing of the Hudson's store and of other businesses led, in part, to the abandonment of Detroit: "everyone and everything moved to those far away places: Livonia, Dearborn, Warren, and Troy," according to the same woman. It was the poor people who, for obvious reasons, were left behind; over 55% of the remaining Motor City population lived below the poverty line (Sugrue, 1996; Wilson, 1987). The neighborhoods previously occupied by workers, owners, and consumers quickly became abandoned as the polarization of wealth and poverty continued to increase and as the feeling of civility continued to decline.

Iris Marion Young (1990), in *Justice and the Politics of Difference*, chronicles the conditions of contemporary urban life as productive of civility:

> As a normative ideal, city life instantiates social relations of difference without exclusion. Different groups dwell in the city alongside one another, of necessity interacting in city spaces. If city politics is to be democratic and not dominated by the point of view of one group, it must be a politics that takes account of and provides voice for the different groups that dwell in the city without forming a community. (p. 227)

Young argues that democracy must be envisioned through the constant negotiation of civility or civic agency in terms of social differences. What becomes important in Young's critique of city spaces and democracy is the way that certain critiques of space, like many student writings, are excluded from the work of our profession, and ultimately exist as accounts of misunderstandings, forms of miscommunication, and evidence of what "failure" looks like. The community ideal of civility then fails to understand how different narratives of space are equally important and how these narratives encourage people to come together through texts, experiences, and language.

Echoing Young's (1990) critique of city life as normative, Pratt (1991) locates complex, discursive encounters in "contact zones," which she defines as "social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power" (p. 40). bell hooks (1998) situates such encounters in "homeplaces," which she envisions as places "of safety, of arrival, of homecoming" that protect against "white power and control" (p. 69). The normative ideal, contact zones, and homeplaces, although necessary, are still fixated, limited places marked by rhetorical territorialism: people compete over territory, whether for power, authority, and access or for comfort and safety, and this competition excludes other people based on economics, geography, education, and race.

Just like contact zones and homeplaces unintentionally exclude people, so do classrooms. The problem here is that some people, who teach writing instruction specifically, and education generally, tend not to acknowledge how writing classrooms are agencies of exclusion. I am suggesting that the social function of writing classrooms is quickly becoming individualistic in pedagogy and method, and in turn, is preventing rhetorical situations of open group collaboration, the sharing of student ideas and opinions, and the development of responsible student writers capable of critical inquiry from occurring. The extent to which talk of classroom exclusion remains abstract from student experiences is similar to Young's (1990) confession that her own view of city life is an "unrealized social ideal" (p. 227). Here, the classroom and the city go hand in hand: in both spaces, people are excluded, social differences are denied and repressed, and autonomy is prohibited all because of

a social ideal that limits differences in thought, writing, race, gender, and so on. We have become so consumed with our own work, our theories, and our practices that we have lost touch with the actual power of a discourse of civility in which all students, particularly developmental students and basic writers, take part.

One strategy for representing a discourse of civility in writing instruction would be to relocate the civility, or civic agency, present on Woodward Avenue on October 24, 1998, to our own classrooms. The most obvious way of relocating this civility is by allowing students to talk about and write about their environments, which would be grounded in theoretical works that promote the power of location: "One way to do this is to encourage students to use the unfamiliar language of the academy to describe and analyze familiar aspects of everyday language use and cultural experience, as for example through ethnographic projects conducted within students' communities or on the college campus" (Soliday, 1996, p. 87). Mary Soliday, in "From the Margins to the Mainstream: Reconceiving Remediation," shows how there is privilege in the places where students live, work, and attend school by enhancing students' awareness of language and writing. From this point, reconceiving the writing classroom to adopt a discourse of civility involves rethinking the role of writing instruction, the function of writing itself, and the role of students in the making of their knowledge through language use.

Certainly Soliday (1996) is right in reconceiving the place of students in writing instruction in terms of geographical narratives of space. In her reconceptualization of the writing classroom, we need not look too far to see that the work of writing instruction can radically change our perceptions of space, whether of cities, communities, or classrooms, and the material conditions of space, whether abandoned, communal, or culturally sophisticated, if we are taught to publicly talk about and narrate our experiences. For example, it is obvious that the Hudson's Department Store altered the national consciousness of cities and raised an awareness of urban prosperity, despite the fact that it left the city in much the same way that it found it, empty and torn asunder; and despite the fact that it brought jobs to the city, it did not holistically cater to its African American inner city population, the largest group of people in the city. Still, narratives of the Hudson's store are important if educators are to better understand the social and political functions of space, and if we are to encourage our students to value their communities by first valuing their levels of literacy gained from their communities.

Although it is one thing to say that narratives of space are as diverse and complicated as the places that people call home, it is another thing to admit that the language of those narratives is unavailable to the community ideal of democracy as a rhetorical agency. As a mark of the territorial space of downtown Detroit for almost 100 years, the Hudson's store represents spatial interactions of civility as well as a contested physical terrain on which will always be written people's desires for freedom, access, democracy, and a realized city ideal. The Hudson's store and implosion perfectly illustrate how the work of writing instruction and the ideal of city life inhabit each other.

The Social Functions of Hudson's and of Writing Instruction

In 1980, it was announced that the J. L. Hudson Corporation would permanently close its downtown store and relocate inside of America's first mall, Northland. Located near the intersection of Greenfield and Eight Mile, the relocation of Hudson's made the promise and success of the northern part of Detroit and its suburban neighborhoods successful. In response to the store's closure and move, Detroit resident Johnnie Mae Barber believes the following:

> Closing down and moving Hudson's caused major turmoil for Detroit. We no longer had a place to hang out 'cause our meeting place was gone. Hudson's was a city in a city: everything you needed was there like clothes, food, furniture, lots of restrooms, restaurants, and elegance. It was the central part of the city where the richest to the poorest, the ordinary to the well known could be found. Everything was dependent upon that one place that occupied almost all of Woodward and downtown. When they decided to close, they left everyone high and dry. They could have at least done something with that building instead of leaving it to die. Coleman Young [former Mayor] wanted to do something with the building, but like always, nobody supported him.

> Anyway, I still remember how people did not care that they had to wait in long lines during the holidays to make a purchase or to see Santa Claus; we did it because we wanted to and because Hudson's catered to family life. When it moved, the essence of Detroit was lost, and in a way, it will always be lost. And people wonder why we Black people yell over access. (J. Barber, personal communication, September 22, 1999)

Most responses to the closing of the Hudson's store mimicked Barber's reaction primarily because of what it meant to the people of Detroit. The department store was overvalued as "the" landscape of Detroit that marked Detroit's achievements in putting to use public space. The implosion temporarily marked the end of Detroit's achievements, reminding people of how bleak, barren, and abandoned any large city like Detroit can be.

This immensely large store in Detroit that hovered down and beyond blocks and blocks of city streets quickly became a mark of abandonment in 1980. The abandonment of both the Hudson's store and of downtown Detroit became symbolic to the abandonment of city residents' notion of place, particularly for Black people. Prior to 1980, Black people in Detroit as well as natives, migrants, and immigrants alike, came to associate place with the experience of living in a prosperous urban city like Detroit. Their new history was to be written based on city ideal insofar as "Black" would come to signify the urban experience in cities: job opportunities, financial leverage, and a level of social privilege. As Stephen Haymes (1995) notes in his study, *Race, Culture, and the City: A Pedagogy for Black Urban Struggle*, the social decline of cities, the dialectic of place and space on Black consciousness, and the theory of a "culture of poverty" became the overemphasized determinants of the Black urban experience in the sense that the categories "race" and "urban" are too often reappropriated by "mainstream white consumer culture . . . to signify the pleasures and dangers of blackness, controlling and regulating black cultural identity and how blacks define and use urban space" (p. 111).

For Haymes, the reappropriation of Black culture aestheticizes the experiences of Black people such as Northern migration, unemployment, the effects of the riots, and loss of rental spaces in the postmodern city by "mask[ing] white privilege and corporate power in the city" (Haymes, 1995, p. 111; see also E. Wilson, 1991, p. 150). The masking of White privilege and corporate power in the Black urban struggle distances groups of people from one another, specifically people of color, immigrants, and White people who are often characterized as wealthy; this distancing reinforces the polarization of wealth and poverty. This polarization, according to Haymes (1995), Cross and Keith (1993), and E. Wilson (1991), further reappropriates the categories race and urban by establishing class differences, power dynamics, and economic privileges in the city.

To address this reappropriation of Black culture, Haymes (1995) calls for a pedagogy of place for Black people that situates their communities in the popular memory of the past. In other words, a pedagogy of place for Black people would allow them to reclaim the categories race and urban by using urban space to renegotiate their identity in their communities and in the city in which they live and work. It is this pedagogy of place that calls attention to the past, that knits the past with the present, and that allows the Black urban experience to resist the "jungle" or "ghetto" motif (Haymes, p. 114). More important, this pedagogy of place argues that people of color and the larger society cannot sustain silence and erasure of the past if progress is to be made. And progress will only occur when a critical pedagogy that accounts for the disfranchisement of all people of color and the upward mobility of businesses and homeowners from urban spaces to rural and suburban spaces is implemented.

In using a critical pedagogy to theorize place and access, Henry Giroux (1983) in *Theory and Resistance in Education: A Pedagogy for the Opposition* argues that critical pedagogy must "have an important role in the struggle of oppressed groups to reclaim the ideological and material conditions for organizing their own experiences" (p. 237). In the context of urban life, critical pedagogy, as with Stephen Haymes' (1995) call for a pedagogy of place, must allow urban "minorities" to examine the dominant paradigms of language, discourse communities, a White consumer culture and its values, which have altered or controlled their identity and relationship with location. This examination allows for the reappropriation of the categories race and urban to occur by positioning the

city as a place of survival, meaning, and belonging. For Haymes (1995), "it is these 'spaces of survival' that serve as public spaces where black people develop self-definitions or identities that are linked to a consciousness of solidarity and to a politics of resistance" (p. 117).

"Spaces of survival" (Haymes, 1995, p. 117) are often painstakingly categorized as areas where "the dual moves toward exclusion and successful persuasion tend to hide from view any value that misunderstanding, resistance, or similar 'failures' might have" (Lunsford & Ede, 1996, p. 174). So instead of urban space, or the city, holistically being understood as a mechanism of defense against inequality, a space of survival, our professional narratives of space as empty, chronic, and decayed work to overpower the narratives of space of the people who actually live in the city. For example, the Hudson's store, before closure and implosion, gave hope to the city's minority population by developing their space, providing jobs in their communities (however few), and making their place more resourceful by bringing opportunities into their "hood." Essentially, the idea of the Hudson's store, and not the actual physical building, served as a "site where one could confront the issue of humanization, where one could resist, . . . where all black people could be subjects, not objects, . . . " (hooks, 1998, p. 42). Clearly, the mere idea of the Hudson's store encouraged city residents to view place as important while they scripted their own definitions of community, space, civility, and survival.

Scripting definitions of such terms represents a discourse of civility through which people can take from their own experiences and write new meanings of space; where the people who are deeply affected by traveling space can actually voice their concerns. Hudson's forced people, specifically people of color and inner city residents, to locate and understand the significance of their own space despite abandonment. It also forced Black people to investigate how terms like access and urban contributed to upward mobility of city businesses. Although the movement of the Hudson's store, in one way, represented the failure of city space, it also represented the power of people's location because location was now based on survival and not on the material and physical realities of a department store. To put it a different way, the Hudson's movement was a reflection of a community struggling to occupy meaningful city space in ways where stories of urban survival and literacy could be told and shared.

In terms of writing instruction, the Hudson's store once again represents the struggle of many students to use their writing as an act of social change and progress. It represents how students are refusing to be passive victims of an arbitrary academic system that encourages them to adopt the conventions of academic writing for entrance into academic discourse communities that narrate their own experiences. As a civic agency that brings to the surface issues of location and the narration of experiences, the Hudson's store comes to embody the struggle and resistance, fears and hopes of democratic citizens (e.g., people of color and inner city residents in Detroit, students in the classroom), and so the urban landscape of Detroit gets inscribed as a space of promise, literacy, and democracy as opposed to being a space of violence, decline, and fear. This is why a democratic theory of space would work to promote location and identity as significant.

A theory of democratic discourse in urban space would not constrict the city of Detroit, or any other urban city for that matter, to only the narratives of a professional discourse. It would not reduce it to excuses over upward mobility such as the Black Migration, the influx of immigrants, or unemployment. For such a reduction would prevent alternative narratives of space and place from occurring while only reiterating urban space as distressful. A theory of democratic discourse in urban space would highlight and make important the dynamics of spatiality, textuality, and geography in cities, classrooms, libraries, and in other spaces and places that are essential to the development of active citizens in scripting their own narratives. The point of such a theory is to implement strategies for understanding why certain spaces and rhetorical practices get misunderstood and ignored in the work of the profession, or in writing instruction, and in the work of the community. In implementing such strategies, labels of student inferiority (e.g., at risk, underprepared, remedial) must be replaced with strategies of intervention and interaction that actually work.

We must understand that the city ideal occurs in our classrooms almost as much as it occurs in spaces

like the Hudson's Department Store. Such an understanding depends on reappropriating categories of race and urban and abandoning perspectives of the urban experience as solely remedial, illiterate, and poor. To do these things is to maximize the spatial and textual practices of urban space, opening up room for the proliferation of narratives of space that may not resemble one another. This is the type of work that I engage in with my diverse developmental students, my first generation college students, and my advanced students at the University of Houston-Downtown, and this is the type of work I intend to contribute to writing instruction in order to "develop a formal plan by which the celebration of our history is an ongoing activity through the development of historical narratives and oral history projects" (Stahl, 1999, p. 13).

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Race and Politics of Developmental Education: The Black Student Take-over of Morrill Hall

David V. Taylor, Dean
General College, University of Minnesota

This is a brief history of the 1969 take-over of Morrill Hall at the University of Minnesota by a group of approximately 50 to 60 Black students. They presented a list of demands and concerns about the campus climate, education, and policies for African Americans at the University. This historic action resulted in the development of systemwide changes and an overall improvement in the institution for all students. More than 30 years later, the University is still examining, prioritizing, and reflecting on these concerns for African American students, faculty, and staff. The General College remains one of the most positive influences in these efforts.

On January 14, 1969, at the conclusion of an unsuccessful negotiation session with then President of the University of Minnesota, Malcolm Moos, a group of between 50 to 60 Black students took possession of the Admissions and Records Office in Morrill Hall, the University's administration building. Earlier during the spring quarter of 1968, students representing the African American Action Committee (AAAC) had presented the administration with "Seven Demands." Although the administration had set up task forces to explore these concerns, by January of 1969 the students became frustrated with the apparent lack of progress. During their meeting with President Moos on the afternoon of January 14th, the students presented three more demands and requested a simple yes or no. The President was either unwilling or unable to respond. The students decided to take direct action ("Report of the Investigating Commission,").

The take-over of Morrill Hall lasted for 24 hours. The event was one of the seminal events in the history of the University in the 20th century. Out of the demands, judicial hearings, and task forces that followed the event emerged an institution that grew to be more sensitive and supportive in principle of all its students.

The University, during the decade of the 1960s, did little or nothing in the way of recruiting minority or disadvantaged students. It did not express any interest in their success or failure. As one student later testified before the Investigating Commission, "...the University was just there. If you wanted to attend and could make it, well and good. If not, forget it." ("Report of the Investigating Commission," p. 22) A considerable number of the Black students protesting were enrolled in the General College, an open admissions program with a general education curriculum. The college offered two bachelor of arts degrees, an associate of arts degree, and certificate programs. It was also the host for unique programs designed to meet the needs of disadvantaged students. The General College admitted students who were less academically prepared. Most Black undergraduate students who matriculated at the University began in the General College. They seldom transferred into other colleges of the University or graduated.

It was this seeming indifference or insensitivity of postsecondary institutions of higher education to the needs of Black students that energized Black students across the nation. Black students at the University of Minnesota felt marginalized and subjected to condescending behaviors and attitudes of faculty and staff not associated with the General College. The larger university was viewed as an attempt at acculturating them rather than accommodating their educational needs. There were very few Black faculty, staff, or administrators as role models to assist them. The concerns of the Black students were summarized

in the last two demands presented to the administration in the spring of 1968: "We want representation of Black students on all major University policy determining groups," and "We want the educational curriculum at the University to reflect the contributions of Black people to the commonwealth and culture of America." ("Report of the Investigating Commission," p. 28).

More than 30 years after the Morrill Hall incident, Black faculty, staff, and alumni involved in the incident have planned a retrospective to commemorate the event. They were moved to action by two concerns. They observed that Black students presently enrolled at the University of Minnesota did not know or could not identify with the past struggles for multicultural awareness. The experiences of former Black faculty, students, and staff had not been captured on paper or subjected to critical analysis. Secondly, in previous published histories of the University of Minnesota, Black people specifically, and people of color in general, were not credited with having any influence over the course of the University's development. James Gray's (1958) *Open Wide the Door: The University of Minnesota 1851-1951* did not recognize the pluralistic nature of the campus community, such as it was. It was a history of the founding fathers and great leaders that led the institution through periods of growth and transition. A more recent history written by Ann Pflaum and Stanford Lehmberg (2001), *The University of Minnesota 1945-2000,* and commissioned as part of the University's sesquicentennial celebration, was more inclusive. As a socio-cultural history of the institution, the book attempted to capture the movements and individuals that influenced the course of the University's history during the last half of the 20th century. Although the book did reference the take-over of Morrill Hall and its impact upon the subsequent history of the University of Minnesota, it was not a substantive treatment. Also absent from the treatment was a discussion of the historical antecedents that led to an expression of student dissatisfaction in 1969.

In February of 2000 an advisory committee was formed for the express purpose of initiating scholarly research into the history of African Americans at the University of Minnesota, particularly the take-over of Morrill Hall. The advisory group was concerned that those individuals involved in the take-over were now approaching middle age, and the sesquicentennial events may be the last opportunity to gather and record their collective memory. The interviews and historical documents generated from this project would form the basis for (a) the publication of articles, essays, and research reports by scholars that capture the essence of this history; (b) a conference to commemorate the presence of African Americans at the University and explore related events and issues at other major universities; and (c) a video documentary that would render this material useful for instructional purposes. Also of interest was the exploration of the connections between the Twin Cities African American community and the University and the role that the General College played in promoting and supporting the concerns of African American students. It was agreed that the history project would be supported by the General College and administratively housed in its facility.

Although not the primary focus of the history project, the relationship between the General College and Black student unrest should be the subject of closer examination. During the decade of the 1960s more students of color were admitted to the University through the General College than any other academic unit. During the period of the middle to late 1960s the college was very active in the issues surrounding civil rights and social justice. It was a supportive educational environment for students of color who were enrolled in large numbers. It was the most diverse of the University's colleges, and therefore, not intentionally, provided a critical mass for the expression of discontent. The College was host to the first Upward Bound grant in 1965-1966. Upward Bound, a federally-funded program, was geared to assist low income, first generation high school students to prepare for college matriculation. The General College also supported the H.E.L.P. (Higher Education for Low-Income People) Center. Established in 1967, the H.E.L.P. Center assisted low-income students and those on public assistance, primarily adults, in their quest for education and training at the University, by facilitating their transition to student life. Under the aegis of H.E.L.P. were three programs, the Progressive Education Program (PEP; 1967), New Careers (1969), and the Working Incentive Program (WIN; 1969). The PEP Program was essentially an advocacy and support program for students of color. The counselors worked very closely with students to assist them in adapting to the collegiate environment. New Careers provided career exploration within the context of a liberal arts curriculum. More than half of the program

participants were Aid to Families with Dependent Children (AFDC) recipients. The WIN Program focused on long-term development of employability skills, including college, and training for AFDC recipients. These programs provided financial support for students (Moen, 1969, 1980).

Programs sponsored by the H.E.L.P. Center were funded in part out of resources provided by the federal government under the aegis of the War on Poverty. As such, these programs enjoyed relative autonomy and often operated outside of the usual constraints applied by the University. Faculty and staff were passionate about their role as advocates for these students. Often times their role of advocate puts them at odds with policies of the central administration. The General College also had pioneered in the development of ethnic studies related courses before the establishment of formal ethnic studies programs at the University. Courses in "Afro-American" history, Chicano history, Native American literature, and Asian literature predate the founding of ethnic studies academic departments. In an attempt to meet the educational needs of its diverse constituency, courses in the General College provided meaningful educational spaces in an academic institution relatively devoid of diverse cultural expression (Moen, 1982).

Established in 1932, the General College was an educational experiment. Its program was conceived as a solution to high rates of attrition being experienced by the University. Its general education curriculum and equally revolutionary focus upon student counseling were designed specifically for the underprepared student and those uncertain about a career focus. From its inception its admissions policy, curriculum, and student focus were challenged, if not openly criticized, by more traditional scholars, educators, and administrators. It was considered a junior college. Although its innovative courses and approaches to instruction garnered national attention in the 1940s and 1950s, the question remained whether or not this college and program were appropriate for the University of Minnesota.

During the 1950s and 1960s the General College enrollment continued to grow as women and people of color began to take advantage of expanded educational opportunities. As the college and its faculty and staff embraced the social imperatives of the civil rights movement, their advocacy on behalf of perceived disenfranchised groups rekindled tensions within the academy. Could the college, having taken a position on social justice, continue to provide a positive educational experience for all of its students? Should the University remain neutral in a rapidly changing socio-political landscape?

Some critics began to argue that the General College had lost its focus, its curriculum was outdated, its degree programs were better suited for emerging community colleges, and its students were not successful in graduating. This experiment in social engineering in the guise of education was expensive, and the expense was being borne by beleaguered taxpayers. The subtextual observation was that these underprepared students were engaged in organized student unrest that could potentially undermine the social fabric of the University. The college became the symbolic Trojan horse with its cargo of subversives. This developmental education program was deemed the antithesis of what a higher education should be.

In some respects the critics of the college had good reason for concern. The admissions policy of the General College did permit the enrollment of students who became catalysts for change. These students resisted acculturation and assimilation and demanded that the university recognize the legitimacy of their perspectives and educational needs. Unable to broker such a detente, they essentially went on strike. The take-over of Morrill Hall in 1969 was unprecedented. Never before in the state of Minnesota had students seized public property and made such significant demands upon an administration. The Black student unrest was followed by anti-war demonstrations and the feminist movement in the 1970s. Each of these movements progressively challenged the University to move beyond its insular posture and institutionally embrace social activism as a vibrant heritage of a land-grant institution.

The decades of the 1960s and 1970s were transformational for the University of Minnesota. It is important for African Americans to explore their role in helping to reinvigorate our understanding of the role and educational responsibility of a land-grant institution. It is equally important to underscore the role that the developmental education program in General College played in a larger historical process.

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Changing Objects to Subjects: Transgressing Normative Service Learning Approaches

Heidi Lasley Barajas
General College, University of Minnesota

This chapter observes the taken-for-granted versus a universal application of a particular instructional design, service learning. Some of the most dynamic ideas about the relationship of student learning and the curriculum appear in the research and application of Universal Instructional Design (UID). Information about UID is relatively new as a postsecondary education concept, and the application of and publication about UID in postsecondary education is limited. In addition, UID to date is exclusively tied to addressing the needs of students with disabilities in a comprehensive way. A paradigm shift that places UID into the instructional methodologies in the higher education classroom suggests many kinds of access issues may be addressed, including multiracial and ethnic concerns. However, thinking through these relationships is a necessary step to intentionally integrating racial and ethnic access needs into UID. Through observation and student writings, the author considers the experiences of different racial and ethnic students and a specific instructional design of service learning. In addition, several suggestions from Ira Shor (1987) are considered in creating a service learning component that addresses a multicultural student classroom for students learning and working in a multicultural world.

Some of the most dynamic ideas about the relationship of student learning and the curriculum appear in the research and application of Universal Instructional Design (Silver, Bourke, & Strehorn, 1998). Universal Instructional Design (UID) emerges from the architectural concept "universal design" that emphasizes meeting the accessibility needs of people with disabilities in both public and private spaces by developing "comprehensive plans that would be attractive to all the individuals who use that space" (Silver et al., p. 47). In like manner, Silver et al. state that universal design strategies also apply to the development of postsecondary instructional design accommodations formally set aside for students with a variety of disabilities. Rather than focusing on modifying instructional approaches on a case by case basis, UID encourages instructors to concentrate on the development of instructional strategies that "most students can use to gain knowledge and skills related to the specific content areas" (Silver et al., p. 48). In other words, UID suggests accessibility issues are an integral part of instructional development, and accessibility benefits multiple students in multiple ways.

When I hear the words "universal design" I tend to cringe just a little. My most recent work in gender and race relations in education (Barajas, 2000; Barajas & Pierce, 2001), along with notable work by Feagin, Vera, and Imani (1996), and Nina Eliasoph (1999), has convinced me that students of color are consistently negotiating a "universal" space that we call school. The problem for these students is that an assumed element of educational spaces is neutrality. Although we may recognize that diversity in an institution that inherently privileges White, middle-class, male characteristics and ideology creates some "climate" issues for students of color, we still maintain that the institution's policies and practices are essentially neutral, and in place for the fair and equal treatment of all students (Barajas; Barajas & Pierce). Put simply, we continue to see educational institutions as racially neutral, with problems experienced by students of color explained as cultural deficiency on the part of the student, an inability to "fit" the educational mold. Our focus is still on the universal assumptions of assimilation.

Historically, assimilation has been a central concern of American social life (de Anda, 1984; Feagin et al. 1996; Gordon, 1964; Park, 1950; Rumbaut & Portes, 1990) and has been seen as both positive and negative. Originally, assimilation, or the acceptance of the dominant culture's norms and values, comes about through an immigrant group's contact with a new culture (Park). A large body of sociological research suggests that racial ethnic groups in the United States gain educational success through assimilation, learning to "do school" in the normative ways. Several assumptions inform this understanding of student success. To begin with, success is predicated on assimilation. Students who do not conform will fail. Such an assumption precludes other possible definitions of success. Students may be successful academically and strongly tied to a culture and an identity that is not White, middle class, and individualistic. In addition, giving up one's cultural values and group identity for a new one is assumed to be an inevitable outcome, and also a desirable one for racial ethnic minorities.

My research on Latino students suggests that involvement in community activities through service learning breaks the normative pathway and positively impacts individual racial ethnic minority students by helping them maintain positive definitions of themselves and their group. Unlike their White peers, who most often do not perform service in their own community, service learning provides an environment in which racial ethnic students can reinforce positive self-definitions through supportive relationships with other people in the community. Latinas in particular navigate successfully through and around negative stereotypes of Hispanics by maintaining positive definitions of themselves and emphasizing their group membership as Latina through community service learning. Re-entry into communities similar to their original home communities affects the development of a positive racial identity, promotes personal efficacy, and provides a safe space in which group membership may be maintained (Barajas & Pierce, 2001).

What has this got to do with Universal Instructional Design? Information about UID is relatively new as a postsecondary education concept. Likewise, the application of and publication about UID in postsecondary education is limited. In addition, UID to date is exclusively tied to addressing the needs of students with disabilities. However, a paradigm shift that places UID into the instructional methodologies in the higher education classroom suggests many kinds of access issues may be addressed, including multiracial and ethnic concerns. Recognizing the relationship between multiracial and ethnic access and general access, and the application of UID, strengthens the general usefulness as well as appeal of a universal model. However, thinking through these relationships is a necessary step to intentionally integrate racial and ethnic access needs into UID. For this purpose, the definition of UID benefits from the expanded concept presented by the Center for Applied Special Technology (CAST, 2001) definition of universal design for learning (UDL):

> The central practical premise of UDL is that a curriculum should include alternatives to make it accessible and appropriate for individuals with different backgrounds, learning styles, abilities, and disabilities in widely varied learning contexts. The "universal" in universal design does not imply one optimal solution for everyone. Rather, it reflects an awareness of the unique nature of each learner and the need to accommodate differences, creating learning experiences that suit the learner and maximize his or her ability to progress. (pp. 1-2)

What better time to work from a more inclusive and specific framework than at the development stages of UID as a concept? To observe the taken-for-granted versus a universal application of a particular instructional design, I consider the experiences of different racial and ethnic students and a specific instructional design of service learning.

Although formal research provides important empirical examples of students' educational processes, we as educators sometimes forget to connect what we know to what we do in the classroom. I intuitively have always believed that most any subject may be learned in a more meaningful way through experiential processes provided by community service learning. However, adding service learning to the syllabus does not necessarily insure we attend to the multicultural needs of our classroom. Adding an alternative learning component like service learning may simply become an enveloped part of a mechanical, normative education because the assumption of "neutral" institutions is that all students will participate in the new component in much the same way. In order to find a truly universal model, we need to transgress.

Service Learning as Universal Design: Different is Good

Current research in the area of service learning indicates that overall, service learning has a positive effect on student development, including personal identity, spiritual growth, and moral development (Astin & Sax, 1998; Boss, 1994; Driscoll, Holland, & Gelman,1996). However, large numbers of student surveys about service learning and personal development, almost without exception, have been collected and analyzed without directly addressing issues of race and ethnic differences in the service learning experience. This is due in part to the few qualitative studies that are more likely to describe the *process* of student development involved in service learning. Furthermore, these studies tend to be about White, often middle-class students entering service sites that have a large racial ethnic minority population and are considered disadvantaged (Dunlap, 1998). Although important research in itself, this qualitative work traces the personal development of White student attitudes about racial issues; interpretations of how these students regard specific race-related, gendered, or classed incidents; and how the experience affected their view of the larger social world. What this literature does not do, however, is examine or at times even acknowledge the differences between students experiencing the service learning site as an outsider, or as a student who is a member of the community, or as performing service in one very similar to their original community.

The consequence of not thinking about differences seriously is that marginalized students spend their educational careers responding and reacting to normative classroom practices that tend to focus on the transfer of authoritative information and obedience rather than respecting and inviting their view of the larger social world. In less tempered words, bell hooks (1994) suggests normative classroom practices that ignore differences treat marginalized students as though they do not belong, and represents "the difference between education as the practice of freedom and education that merely strives to reinforce domination" (p. 4). Although hooks' statement is decidedly political, it is also accurate. Ira Shor (1987) argues that "alienation in school is the number one learning problem, depressing academic performance and elevating student resistance. Student resistance to intellectual life is socially produced by inequality and by authoritarian pedagogy in school" (p. 13). Shor also suggests that a Freirean (1970) pedagogy that is multicultural, critical, student-centered, experiential, research-minded, and interdisciplinary needs to replace mechanical (i.e., normative) learning (Shor, p. 22). I would argue that differences among students require us to approach learning and teaching differently, as Shor and hooks suggest.

Service learning is a valuable approach for teaching and learning in a multicultural classroom as part of a multicultural world. In a true liberatory sense, however, a universal approach to education through the use of service learning would acknowledge and encourage marginalized students to see themselves, and the community they serve, as the subject of work and not as the object that we observe. The difference between the two may not be considered in a taken-for-granted application of service learning for mainstream students. To use service learning in a teaching situation where students with varied identities come from varied communities, our "paradigms must shift but also the way we think, write, speak. The engaged voice must never be fixed and absolute but always changing, always evolving in dialogue with a world beyond itself" (hooks, 1994, p. 11). In so doing, students would be seen in their particularity as individuals, and we would value everyone's presence with the ongoing recognition that everyone influences the classroom dynamic, that everyone contributes, and that these contributions are resources (hooks, pp. 3-8).

Any time an educator suggests something as complicated as a paradigm shift, the rest of us often translate that into "more planning, more time, more work." Although any change demands at least one of the dreadful "more" requirements, we do not need to reinvent the wheel. We already have a Freirean paradigm available through which we can model an effective service learning component in our classroom. In particular, Shor (1987) offers a model for teacher education that he describes as a "Freirean agenda for the learning process" (p. 23). Several of his summarized points are very useful in creating a service learning component that addresses a multicultural student classroom as opposed to supporting the "myth of a neutral, shared, national history [that] reduces

the critical and multicultural potentials of education" (p. 17). Moreover, building service learning from this particular framework is imperative to the task of creating a Universal Instructional Design methodology that is sensitive to multicultural sensibilities.

The Learning Process: Setting the Goal

The first goal is for teachers to "situate learning in the students' cultures – their literacy, their themes, their present cognitive affective levels, their aspirations, their daily lives" (Shor, 1987, p. 24). One advantage to integrating service learning into a course is the ability to connect the academic to the concrete circumstances of life. However, we cannot assume what those circumstances may be. Shor asserts that regardless of the discipline, grounding the learning in student life will "insert these courses in the *subjectivity* [his emphasis] of the learners" (p. 24). This can be accomplished in several different ways. One is to provide a dialogue method of teaching suggested by Freire (1970). Students more often than not offer personal information along with their opinions. This helps the teacher get a sense of the various communities students bring with them to the classroom.

A more specific understanding of students' lives and literacy can be gained through reflective writing. Ask students how specific issues in the course relate to their social location in the world. For example, ask the students to write a one-page opinion about a specific question or topic. Next, ask the students to write a one-page reflection about *why* they answered the way they did. Do their family, religious, or educational backgrounds affect their perceptions? Does where they live, or their gender, play a part in their perceptions? Be prepared for a variety of answers. For example, at the beginning of the semester I asked students to write about the existence of gender bias in the classroom. One White male college freshman wrote:

> Gender-bias in the classroom. We hear about it everyday on the news, in magazines, in our own classrooms. So, is it as big of an issue as we hear it is? Like all normal people I know, I would have to say no.

I have observed that often students from marginalized groups have thought about the connection between what they think and their particular social location. On the other hand, mainstream students tend to respond at the beginning with words such as "normal" or phrases like "everyone knows that" or "I am just a common person who thinks like everybody else does." To contrast, one African male college freshman wrote this about gender:

> In my country women are not treated as equal. They cannot get the same education or jobs that men do. They are considered best at staying home and taking care of children, and so sometimes can teach young children. But I think that is unfair. Now that many of us live here in the United States, women are working very hard to become educated and face more difficulties than men getting the education they want. They also work very hard to support their family. It is better that all people, men and women can get the education they want so they can be the best people they want to be.

Of course, not all marginalized students are self-actualized and not all mainstream students think their experience is identical to everyone else's experience. What is important to recognize is that both answers are valuable for understanding student lives, and in understanding the degree to which they connect the academic world to concrete circumstances of living. Furthermore, a surprising response at the beginning as to the universal normalcy of his opinion on gender made what the same White male college freshman wrote in his final paper even more of a surprise. Here are a few of his comments after observing gender differences at his service site:

> After seeing the differences in the ways boys and girls were treated in the classroom I observed, boys being rewarded for action and girls for inaction, what I saw was supported by a channel _ news report on separate classrooms. The channel _ news reported single gender classrooms resulted in improved grades and more interaction between students and teachers. Does this mean that gender separated classrooms are the way to go on this issue? The problems children face—loss of self esteem, decline in achievement, and elimination of career options (particularly for girls) are at the heart of education's problems, *and not normal at all.* [my emphasis]

There is a problem with reflective writing. On the practical side, if we have a class of 45, reading reflective papers is not a problem. On the other hand, a class of 175 is more time consuming. Reading and commenting on each paper offers students the optimal learning situation. However, the goal of the exercise is to situate learning in the students' cultures and daily lives. The goal is accomplished by the teacher allowing the students to think about and write about themselves and their communities as the subject of the conversation, an exercise that may help mainstream students recognize their position as subject is taken-for-granted, and helps marginalized students position themselves as subjects rather than objects. How much we learn about our students, and how much students learn in the process, is not totally dependent on reading and commenting on each paper, but rather on the quality of the discussion that is driven by the process. Discovering part of their own social location, students are better able to understand their attitudes, perceptions, and interpretations of their service learning experiences. For example, one White female college freshman wrote:

> The reason that I chose the service I did is because I come from a fairly wealthy area with no evident poor people. Since I have been a student here at _____ I have encountered the issues that effect [*sic*] and people who are affected by poverty and homelessness. I also figured I could learn about people who are struck by poverty and homelessness and social issues leading to these individual situations . . . what I found is not at all what I expected when I started this class. I guess that you could say I was being closed minded about the experience, that I had stereotypes about homeless people. I think that my nights at _____ homeless shelter broke down my feelings of bias towards these individuals.

Recognizing her own privilege allowed this student to observe her own biases and stereotypes about the homeless and to reconsider her attitudes and perceptions of the social issue as well as the people involved. Without considering her own social location and recognizing her attitudes and perceptions as the subject of her experience, this student would likely objectify the homeless, allowing a "closed mind" full of negative stereotypes about individuals to perceive the situation as an individual problem without considering the social issues surrounding homelessness.

Another student, this one a Vietnamese college freshman, also selected a service learning experience because of her social location. She wrote:

> To forget their language is to forget their own culture. These were the words I brought with me when I came for [*sic*] VietNam to the U.S.A. Today, the Vietnamese children who are born in the United States, 80 percent do not know how to speak Vietnamese. It is hard for them to communicate in their own society. Some feel left out because they do not understand what others are saying. This is why I decided to teach Viet in a program at _____ for children 7 and up. The culture is important to each and all of us. If we value and maintain the culture then it will be always in the heart, and will help kids when they are out there in the world not have that "left out" feeling.

Given the opportunity to situate her learning in her life experience, this student was also able to make her attitudes and perceptions the subject of her experience. Although the examples are very different, both students made choices about their service learning sites, and both students interpreted their sites through acknowledging their social relationship to the service experience. If service learning had been approached as an experience *external* to the student's individual social location, the interpretation of that experience could very well be different. The first student may not have considered anything beyond the individual. The second student may never have felt comfortable exploring her own community, fearing normative interpretations of that community; therefore her own experience would be negative or reinforce the value of assimilation to English only. In both cases, these young women benefited from situating their learning in their particular cultures and everyday lives. Doing so allowed difference to be valuable, both personally and academically.

Another goal Shor (1987) discusses that is useful in creating a service learning component that addresses a multicultural student classroom is the need for cross-cultural communications. Shor suggests two strategies to accomplish this goal. First is the use of "nontraditional literatures outside of the official canon, from labor

culture, ethnic groups and women's writings" (p. 25). Although many educators have for some time used varied literatures in their classroom, and some publishers have made more nontraditional literatures available, the sad truth is that we still have to make an effort to gather these materials not generally available in traditional texts. In addition, we must be flexible and persistent in our efforts to continually update materials that relate to our changing student populations. If we do not, the marginalized student's life and community is made the object of discussion, and our efforts to situate service learning in the students' cultures will be expropriated by the academic materials we present. This is not to say that varied viewpoints cannot be presented, including the traditional canon. Having both is in fact important to dialogue teaching, allowing all student viewpoints to come forward.

The second strategy is for teachers to use ethnographic methods in order to familiarize themselves with their student population, as well as the community sites surrounding their institution. Instructors who visit and study community service sites, or who volunteer on a limited basis, are more likely to be successful in situating learning in the students' lives. In addition, teachers need experience communicating in various cultural situations. As Shor (1987) indicates, "experience in cross-cultural communications will be valuable for teachers who are likely to lead classrooms with diverse student populations" (p. 25). The reality of participating and observing in a community site first hand facilitates the dialogue that takes place in the classroom, and gives the teacher a more realistic picture of what students are experiencing. The idea is that the service learning experience improves for students if teachers also participate as learners in the service learning component they construct for the class (Williams, 2001). This should be considered part of the preparation process, much like constructing a test or preparing a lecture. The difference is that for the teacher, the quality of the activity becomes as important as the quality of the information, just as the activity becomes important for the student.

The idea of learning cross-cultural communication through community service experience may seem unnecessary. After all, we educators are in the business of communicating the knowledge of a discipline to students, many of us having done so for years. The problem with explaining away this opportunity to learn more about cross-cultural communication is that what we think is communicating in the classroom may not be received by students with the same enthusiasm. bell hooks (1994) recalls of her educational experience as a Black female that the

> vast majority of our professors lacked basic communication skills, they were not self-actualized, and they often used the classroom to enact rituals of control that were about domination and the unjust exercise of power... I wanted to become a critical thinker. Yet that longing was often seen as a threat to authority. Individual White male students who were seen as "exceptional," were often allowed to chart their intellectual journeys, but the rest of us (and particularly those from marginal groups) were always expected to conform. Nonconformity on our part was viewed with suspicions, as empty gestures of defiance aimed at masking inferiority or substandard work. (p. 5)

As painful as hooks' words are to hear, we must hear them. I have always maintained that most teachers really want to teach, and want to teach in such a way that all students' needs and potentials will be reached. We are, however, also products of an imperfect educational system, one in which we must be willing to continually be reflective about the way we teach, just as we need to continually update the books we use for our courses.

The last goal Shor (1987) discusses that is useful in creating a service learning component that addresses a multicultural student classroom is the promotion of a critical literacy, a literacy that generates critical awareness more than basic competency. Shor suggests critical literacy requires "all courses to develop reading, writing, thinking, speaking, and listening habits to provoke conceptual inquiry into self and society and into the very discipline under study" (pp. 23-24). For students, critical literacy encourages students to problematize or question all aspects of their learning, moving beyond memorizing facts or simply stating opinion. Critical literacy also encourages the integration of experience, empirical data, activities, and discussion. One Somali male college freshman writes about his experience with critical literacy this way:

> It is incredible and remarkable how much knowledge and experience I have gained from service learning since I started. What is even more interesting is how the readings and class discussions made sense to me . . . although doing community service has been in my thinking for a period of time, taking this course has opened a clear vision of how to be involved or do community service in my own neighborhood. Before this, one obstacle for me to do service was knowing where to go. Most of all I am well delighted to use the concepts and theories I have learned in class to help me make practical decisions about the best service I can do for my community.

Simply sending students into a community to participate and observe will not necessarily integrate academic knowledge with the real world. What glues the two together is the development of student learning through critical literacy. In order to create a service learning component that addresses a multicultural student classroom, we must do our best to situate learning in the students' cultures and their daily lives. Just as we must continually develop as teacher-learners, students must also be allowed to experience a process of learning, rather than just building skills or meeting competency. The first step is for us as educators to realize the possibility of helping students develop all areas of learning regardless of the discipline we teach. To do so effectively, we may take on the role of student by attempting to develop cross-cultural communication skills and by performing ethnography through a service learning project to familiarize ourselves with our student population and surrounding communities. As foreign as it seems to think of developing writing and listening in a math class, or speaking and reading in an economics course, it is possible. What it takes is a shift in the way we may have been taught to think about our disciplines to a more universal approach to learning.

Shifting: The First Step to Transgressing

I am reminded how difficult it is to shift our thoughts about the specific disciplines in which we have been trained by a recent conversation with a colleague who completed a Master's in sociology, took time away from that discipline to complete a law degree, and is now completing a Ph.D. in sociology. This very bright and school-wise individual struggled with the differences between reading, writing, speaking, and listening as a sociology student as opposed to a law student. She did not lack skills in any of these learning areas, but found that the two disciplines were so different, she was surprised by the time and effort it took to figure out how "to do" each discipline and to eventually work smoothly between the two. Imagine what this means to undergraduate students who are not nearly as developed academically or as school savvy. Then, imagine how differently this would look if classrooms engaged in critical literacy.

We need to transgress what we know about our disciplines, how we approach teaching, what we think about students, and learn to see teaching as a valuable aspect of the academic profession. Although many academics do take teaching seriously, we suffer from our experience in an academic model where we have learned that teaching is duller, less important than other academic pursuits, and disconnected from research. And, we suffer because we do not understand that

> the classroom remains the most radical space of possibility in the academy. For years it has been a place where education has been undermined by teachers and students alike who seek to use it as a platform for opportunistic concerns rather than a place to learn (hooks, 1994, p. 12).

We suffer from thinking of our intellectual selves as particularly rather than universally valuable, just as we teach particularly to our discipline rather than universally to learning. My thoughts on this crisis for both educators and students is reflected in hooks' (1994) collective call

> for renewal and rejuvenation in our teaching practices. Urging all of us to open our minds and hearts so that we can know beyond the boundaries of what is acceptable, so we can think and rethink, so that we can create new visions, I celebrate teaching that enables transgressions—a movement against and beyond boundaries. It is that movement which makes education the practice of freedom. (p. 12)

The inclusion of a service learning component specific to the needs of a multicultural classroom is one step towards teaching and learning as a practice of freedom. For now, I focus on freedom from the institution's marriage to an assimilationist model that is a taken-for-granted part of the everyday workings of academic life. Educational institutions continue to define universal as students fitting a mainstream experience. We need to change our definition of universal, beginning with the idea that centering our classroom activities and requirements around what we used to consider "special needs" students in reality creates a classroom that simply promotes student centered learning for all students. It is simpler to shrug off teaching, viewing it as peripheral to our academic careers. But think, when we are able to shift instead of shrug, the value of all kinds of knowledge, including knowledge brought to us through the academic canon, will explode the possibilities of teaching and learning, begin to meet the needs of a multicultural classroom, and begin to erase the boundaries between the academy and the communities we serve. Shift, don't shrug.

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Science Education and the Urban Achievement Gap

Randy Moore
General College, University of Minnesota

Urban schools in the United States educate most low-income students and almost half of all ethnic minority students. However, these schools are characterized by a dramatic achievement gap in which students learn significantly less than their suburban counterparts. These academic disparities are especially dramatic in science. To close the urban achievement gap, we must address inequities involving resources, funding, and the quality, diversity, pedagogy, expectations, and courses offered by urban science teachers.

More children now live and attend school in urban settings than at any time in world history (Barton & Tobin, 2001). This is especially true in developing countries, where urban populations are growing three times faster than rural ones. Urban environments house nearly half of the developing world's population, and 7 of the 10 largest cities in the world are in developing countries (United Nations Development Programme, 1999). Whereas at the beginning of the twentieth century only 10% of people lived in urban settings, more than half of humanity—that is, more than three billion people—lives there today (Barton & Tobin, 2001; Lynch, 2001; United Nations, 1999).

In the United States, more than 75% of the population resides in urban settings (Tobin, Roth, & Zimmerman, 2001; U.S. Census Bureau, 2000, 2001b). These urban settings are home to large numbers of ethnic minorities. For example, minorities account for 57% of the population of New York City (the nation's largest city), 60% of the population of Houston (the nation's third-largest city), and almost 80% of the population of Detroit (the nation's tenth-largest city; Barton, 2001; U.S. Census Bureau, 1998). These urban populations also include large numbers of immigrants. About 10% of the U.S. population is foreign-born, and most of these immigrants live in urban areas in California, New York, Florida, and Texas (Lollock, 2001). Immigrants comprise 38, 59, and 28% of the total populations of Los Angeles, Miami, and New York City, respectively (Barton, 2001).

Urban Schools

Urban education is important in the United States because large urban school districts educate 25% of all school-age children, 30% of all English-language learners, 35% of all low-income students (i.e., students from low-income families), and nearly half of all ethnic minorities (Hewson, Kahle, Scantlebury, & Davies, 2001; Pew Charitable Trust, 1998). More than 40% of U.S. students are culturally, linguistically, or ethnically diverse (Darling-Hammond, 1997). This diversity—most of which occurs in the nation's largest 20 cities (U.S. Census Bureau, 2001a)—produces striking racial and socioeconomic differences in the populations of urban as compared to suburban schools. Indeed, most Black students attend urban schools, whereas most White students attend largely suburban schools (Norman, Ault, Bentz, & Meskimen, 2001).

Urban schools have significantly higher truancy rates, higher dropout rates, and lower graduation rates than suburban schools. The highest dropout rates occur for low-income, urban Black (17%), and Hispanic (23%) students (Fine, 1991; "Graduation rate," 2001). Most ninth-graders in central city schools do not complete high school in four years (Barton, 2001; Education Trust, 1995), and the dropout rate for the poorest 20% of students is 600% higher than the dropout rate for the wealthiest 20% of students ("Graduation rate," 2001). The gap in college-going rates between students from low-income families and

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high-income families is 32 percentage points, the same as it was in 1970. This gap persists despite large governmental expenditures (e.g., Pell Grants) to help students from low-income families attend college. More than 80% of high school graduates from families earning more than $75,000 per year go to college, but only about 50% of graduates from families earning less than $25,000 per year do so (Burd, 2002). Each year, between 80,000 and 140,000 qualified students from low-income families do not pursue college degrees because they believe that they cannot afford to do so (Burd).

Poverty and low socioeconomic status are defining features of students who attend urban schools in the United States. Indeed, 21% of all urban students live in poverty, and 50% are near the poverty line at some time in their lives. Although children comprise only 26% of the total U.S. population, they comprise 39% of urban poor. More than 40% of urban students attend high-poverty schools (Barton, 2001; U.S. Department of Education, 1996). The overall poverty rate for Whites is 8%, but for Hispanics and Blacks it is 26% (U.S. Census Bureau, 1998). These data are even more troubling when one considers young people: whereas 16% of White children live in poverty, 40% of Hispanic children live in poverty. For Blacks, the percentage is even higher, 46% (Barton, 2001). This poverty is often centered in urban settings (Tobin et al., 2001).

Urban Education's "Achievement Gap"

Students in urban environments face a variety of unique challenges (e.g., increased rates of poverty). These challenges have produced a dramatic "achievement gap" that characterizes urban schools. For example,

1. Most urban students score below average on national achievement tests (Counsel of the Great City Schools, 1994; Hewson, et al., 2001; Olson, 2001; Tobin, Seiler, & Walls, 1999; Waxman & Padron, 1995).

2. The urban poor score disproportionately lower on standardized tests in all academic subjects and in all school grades (Anyon, 1997; Barton, 2001). Graduates of urban schools are often unprepared for the rigor of college courses and must enroll in developmental education programs (Moore, 2001).

3. Almost one-third of White kindergartners later graduate from college, but only 16% of Blacks do (Borja, 2001).

4. According to the most recent National Assessment of Educational Progress, 26% of urban fourth graders are proficient readers, compared with 36% of suburban and 32% of rural fourth graders. Although 40% of White fourth graders read at or above the proficient level, only 12% of Blacks and 16% of Hispanics perform as well (Paige, 2002).

5. More than 40% of Asian American tenth graders and 34% of White tenth graders take college preparatory courses, but only 26% and 23% of Blacks and Hispanics do (Borja, 2001).

These academic disparities are especially pronounced in science. For example, Berliner (2001) discovered in a recent study of scores on the Third International Mathematics and Science Study assessment that in science,

> The scores of white students in the United States were exceeded by only three other nations. But black American school children were beaten by every single nation, and Hispanic kids were beaten by all but two nations. A similar pattern was true for mathematics scores. (p. B3)

The urban achievement gap in science between White, Black, and Hispanic students has long been a major concern of many educators (Moore, 2001; National Center for Educational Statistics 1999, 2000), yet science has remained a hostile neighborhood for most minorities (Moore). For example,

1. Although African-Americans and Hispanics comprise almost 25% of the U.S. population, they earn only 13% of the U.S. science and engineering bachelor degrees, and only 7% of the doctorates (Rey, 2001). Despite some improvements, minorities remain underrepresented in graduate and undergraduate education in science and engineering (National Science Foundation, 2000; Rosser, 1995).

2. Young White males have significantly more positive attitudes toward science than do women or African Americans. Once enrolled in science programs, the confidence of White males increases whereas that of others decreases (Moore, 2001; Moore, Jensen, & Hatch, 2002; Vasquez, 1998).

Although there has been modest (at best) progress in reducing the achievement gap in selected inner city schools ("Inner-city students," 2001), none of the repeated "reforms" of science education—for example, the system-wide status of science teaching (Weiss, 1977, 1987), the professional development of science teachers (Graham & Fultz, 1985), the roles of state and federal policies in shaping science education (Blank, 1988), and the "systemic reform" of science teaching (Champagne, 1988; Zucker, Shields, Adelman, & Powell, 1995)—have eliminated the achievement gap among underrepresented, underserved students (e.g., ethnic minorities, students from lower socioeconomic classes). That is, the achievement gap persists despite more than 40 years of study and several trillion dollars of investments in public education (Paige, 2002). Indeed, a study of trends on the National Assessment of Educational Progress from 1990 to 2000 showed that

1. In reading, there have been almost no significant gains on closing the achievement gap that separates minority and nonminority students (Olson, 2002).

2. In mathematics, about half of the states for which data were available made some progress in closing the achievement gap between Black and White students. However, those gains were so small that it would take decades to eliminate the achievement gaps in those states. Moreover, much of the progress was due to the exclusion of scores of students with disabilities and students who speak limited English (Olson, 2002).

In some instances the achievement gap between White and Black students has actually widened. For example, the 15-point gap separating White and Black students rated as proficient in 1990 on the 300-point National Assessment of Educational Progress widened to 29 points in 2000; this gap represents approximately three years of learning (Fletcher, 2001; "New test scores," 2001). Although science educators have repeatedly promised to eradicate the urban achievement gap in science with phrases such as "science for all" (American Association for the Advancement of Science, 1989), huge Black-to-White and Hispanic-to-White disparities remain (American Association for the Advancement of Science, 1989; Lynch, 2001). The one-size-fits-all approach to science education has not worked (Lee, 1999; Lynch, 2000, 2001; Lynch et al., 1996; Rodriguez, 1997), and we are still in the midst of a crisis (Tobin, 2000). Science education in the United States has never been for all—and still is not, especially in urban schools.

Lessons of History: Can Achievement Gaps Be Closed?

Today's urban achievement gap in science and other subjects exists primarily as a rich-poor, minority-White problem that is strongly influenced by distinct historical experiences and cultural values, many of which are the consequences of sociocultural position. An appreciation of history can help to understand and "deracialize" this gap and, in the process, recast it as a common challenge facing marginalized groups in general (Norman et al., 2001). This approach to understanding the urban achievement gap makes the problem solvable and frees us from the temptation to dismiss it until society improves (i.e., "blame society") or until we can correct supposed behavioral and cognitive deficiencies of marginalized learners (i.e., "blame the victim").

What happens when a particular minority resides in several societies, in which differences in academic achievement depend on how the minority is viewed by the majority? In Japan, Koreans are marginalized and their school performance is significantly lower than in the United States, where their performance is comparable to other Asian groups (Norman et al., 2001; Ogbu, 1978). Similarly, Burakumin are ethnic Japanese who perform poorly in Japanese schools where they are marginalized, but perform comparably with Japanese and other Asian groups in the United States (De Vos & Wetherall, 1974). These data suggest that the academic performance of various ethnic groups is strongly influenced by factors such as the group's sociocultural position (Benson, 1995; Lynn, Hampton, & Magee, 1984; Ogbu). A corollary of this conclusion is that an understanding of these same factors can help eliminate the urban achievement gap.

Similar conclusions come from historical studies of achievement gaps in the United States. For example, there were a variety of achievement gaps when Italian, Polish, Jewish, and other immigrant groups began arriving in the United States near the beginning of the twentieth century. These immigrants lived

predominantly in urban settings and usually did much worse in school than their European American peers who were born in the United States (Lieberson, 1980). European immigrants and European Americans born in the United States had a low academic profile that correlated with their occupying a lower socioeconomic position in society (Fischer et al., 1996), which, in turn, meant that they were poor, segregated from mainstream society, and generally viewed as inferior. As these immigrants began to be assimilated into society, they did better in school and the achievement gap disappeared. This assimilation into society and improved academic performance correlated positively with their move from urban to suburban settings (Norman et al., 2001). During the same time, Blacks in the northern United States, most of whom lived in urban settings, often did *better* in school than White immigrants (Lieberson; Norman et al.; Sowell, 1977, 1995).

The achievement gap that now separates urban minorities from Whites has not always existed as it does now. For example, after President Lincoln's Emancipation Proclamation in 1863, Reconstruction prompted many schools to admit Black students. In these schools, the attendance by and per capita spending on Blacks was about the same as for Whites (Lieberson, 1980; Norman et al., 2001). These trends correlated positively with Blacks having higher enrollments and attendance in schools than newly-arriving European immigrants, and in some cases doing better in school than native Whites (Norman et al.). However, when most of the remediation efforts associated with Reconstruction ended in the 1880s, per capita spending on Black schools fell to 70% of that for White schools (Church & Sedlak, 1976). This change in the allocation of resources and educational opportunities ushered in a period of declining school attendance and academic performance by Blacks that continues today (Lieberson; Norman et al.).

Urban Education and Cultural Diversity

An oft-stated goal of science education is "science for all" (American Association for the Advancement of Science, 1989), but what happens when our particular view of science is not compatible with students' cultural identities and values? The diversity that characterizes urban classrooms produces cultural interfaces in which students, administrators, and teachers from differing cultural backgrounds interact in the pursuit of a common goal. In urban science classrooms, these interfaces involve students' and teachers' different cultures as well as the often foreign "culture" of science (e.g., the practices, policies, history, and expectations of science). These cultural interfaces often involve power imbalances (e.g., the overwhelming majority of scientists and science teachers are White). These imbalances often alienate minority students and cause them to resist science, thereby making their inclusion in school science classrooms and science learning-communities impossible (Brickhouse & Potter, 2001; Knapp and Plecki, 2001; Norman et al., 2001; Ogbu, 1978). This helps explain why minorities often avoid science courses and science careers (Moore, 2001).

Urban students' attitudes toward, interest in, and motivation to learn science, as well as their willingness to consider particular scientific explanations, do not depend only on the "facts" of science. On the contrary, they also depend on community and cultural beliefs, acceptable identities, the consequences of these explanations for a student's life inside and outside the classroom, and how students respond to teachers' efforts to direct their learning. That is, learning about science involves much more than merely whether students can understand a scientific explanation; it also depends on how their social and cultural options affect their interest to do so (Lemke, 2001). Contrary to the implied suppositions of conceptual change, constructivism, and more traditional approaches to science education, language and culture cannot be separated from the learning of scientific content (Lynch, 2001). This is especially true in urban settings, where linguistic and cultural diversity is great. The mismatch between this diversity of students and the homogeneity of the students' teachers often alienates students and impedes learning.

If, as is claimed by Bodley (2000), cultural differences can be subject to negotiation, and therefore negotiated agreements, how can we transform cultural conflict into cultural cooperation? How can teachers use these differences to maximize student learning? Cultural conflicts in urban science classrooms often arise at interfaces of the normative culture of science and the community cultures of ethnic and socioeconomic minorities (Aikenhead, 1996; Allen & Crawley, 1998; Atwater, 1994; Barba, 1993; Cobern,

1996; Costa, 1995; Lemke, 2001) and are most dramatic when neither teachers nor students can effectively navigate the cultural disparities that inevitably arise in classrooms having culturally diverse students. Students cannot simply change their views on one topic or in one scientific domain without addressing the need to change anything else in their lives or identities (Lemke; Norman et al., 2001). This is a major reason why students from different cultural backgrounds often have very different experiences within the same science classrooms. This, in turn, often results from teachers who consciously or unconsciously reflect their society's notions of who or what is privileged, qualified, and appropriate in science, and who or what is not. This cultural aspect of science education is important because it conveys powerful messages to students about inclusion and success. As noted by Holland, Lachicotte, Skinner, and Cain (1998),

> Even in situations where all students are admitted to the arena of learning, learning is likely to become unevenly distributed in its specifics. Teachers will take some students' groping claims to knowledge seriously on the basis of certain signs of identity. These students they will encourage and give informative feedback. Others, who they regard as unlikely or even improper students of a particular subject . . . are unlikely to receive their serious responses. (p. 135)

These behaviors by teachers often disengage students, who lack confidence, don't expect help, don't know how or where to ask for help, and feel uncomfortable in schools (Rhem, 1998).

This scenario contrasts sharply with the relatively homogeneous populations of students from upper and upper-middle class suburban families. These students often are confident about academic experiences and have a greater cultural advantage for success in science and other subjects than do urban students (Rhem, 1998). This advantage results from the fact that schools tend to reward students who demonstrate the knowledge and appreciation of upper and upper-middle class culture (Bourdieu, 1992; Sahlins, 1976; Tobin et al., 2001; Willis, 1977). The upper-middle class model of academic success is the primary cultural norm in schools; students who do not fit this model are often devalued when they deviate from expected patterns (e.g., they are told that they don't try, do not want to learn, etc.; also see Eckert, 1989; Marriott, 2001; Rothstein, 1993; Tobin et al.). Because most urban students do not fit this model, it is easy to understand why many of them see school as hegemony (Apple, 1979; Clarke, Hall, Jefferson, & Roberts, 1976; Tobin et al.).

Eliminating the Urban Achievement Gap

Today, the lower academic achievement of urban Blacks and other minorities correlates positively with urban schools having fewer resources, fewer opportunities, fewer qualified teachers, and an atmosphere that is often based on low expectations. These factors help explain why urban students under perform on achievement measures compared to those in more affluent suburban settings.

If we are to eliminate the urban achievement gap in science, we will have to eliminate the various other gaps that coalesce and intensify to create the achievement gap (Tobin et al., 2001; Tobin et al., 1999). Specifically, we will have to aggressively address (e.g., with legislation, financial incentives) the following inequities involving resources and teachers that have long characterized urban schools (Cohen, Raudenbusch, & Ball, 2000; Knapp & Plecki, 2001).

Resources

Much of the urban achievement gap in science results from the fact that urban students disproportionately attend schools with fewer or inferior resources (Clewell et al., 1995; Day, 1989; Kozol, 1991; Necochea & Cline, 1996; Peevely & Ray, 1989). Students in low-income urban schools usually have access only to outdated books, no laboratories, little or no scientific equipment, and few science-related extracurricular activities (Barton, 2001; Oakes, 1990). Similarly, teachers tend to include less technology into classes for lower-track students than in classes for high achievers (Reid, 2001). This is important because the use of computers in classes correlates positively with improved grades and increased learning; these gains occur regardless of the economic make-up of a school (Hoff, 2001).

The solution to these inequities involves money, which depends on funding mechanisms for public schools. In most states, public schools are funded by taxes on local residents. Poverty and low family incomes are disproportionately concentrated in urban areas, so urban schools will continue to have less money, and therefore fewer resources, than other schools. To close the urban achievement gap, the per-student funding in urban schools must be made similar to that of suburban schools. Attempts to accomplish this by integrating schools by wealth rather than race have often been academically successful but politically controversial (Richard, 2002).

Teachers

Qualifications. Teachers are the most important ingredient for academic success, but in low-income urban school districts the percentages of uncertified and unqualified teachers often exceed those of certified and qualified teachers (Barton, 2001; Darling-Hammond, 1999). This means that schools having the greatest need for good teachers are those with either the least experienced or least qualified teachers (Viadero, 2002a). A major cause of this is that most teachers in science as well as other subjects consider urban schools to be less desirable than suburban schools (Viadero, 2001a; 2001b; 2002a; 2002b). The resulting teacher shortages that typify urban schools are especially critical in science (Tobin et al., 2001). This is important because increased academic performance in science and mathematics correlates positively with students having experienced, qualified science and mathematics teachers (Fletcher, 2001; Henry, 2001a; Hoff, 2001). Clearly, the recruitment of qualified teachers is one of the biggest problems facing urban schools (Lewis, Baker & Jepson, 2000). To close the urban achievement gap, we must require that urban schools are staffed by competent, qualified teachers.

Diversity. Students who are taught by a teacher of their own race often score higher on standardized tests (Borja, 2001). However, the diversity of science teachers has not kept pace with the diversity of students (Lynch, 2000). Whereas students in urban classrooms are increasingly diverse, the population of teachers remains overwhelmingly White and middle class (Norman et al., 2001). Minority students account for 40% of the enrollments of K-12 education, but only 13% of their teachers are minorities (Borja, 2001). The mismatch of teachers and students often creates cultural conflicts that inhibit learning (Madsen & Mabokela, 2000; Norman et al., 2001). To close the urban achievement gap, we must ensure that the diversity of urban teachers more closely matches that of urban students.

Pedagogy. In urban schools more than in suburban schools, the dominant teaching style is the monologue-like lecture that forces students to be passive learners rather than active users and producers of knowledge (Hewson et al., 2001; Lemke, 1990; Seiler, 2001). Instead of critical thinking and experiential, hands-on inquiry, the emphasis of these classes is usually repetitive drills and the recall of memorized facts and definitions. This pedagogy—that is, one that focuses on teachers and in which there are few opportunities for developing higher-order thinking skills—is what Haberman (1991) has called the "pedagogy of poverty." The disconnect that occurs between most teachers and students in these lecture-oriented urban classrooms can be minimized by attitudes and activities that engage students and lessen or eliminate cultural conflict and the devaluation of students (Norman et al., 2001; Spindler & Spindler, 1989). A further discussion of these attitudes and activities is provided by Moore (2001). To close the urban achievement gap, we must demand that teachers use effective teaching techniques and strategies (Moore).

Expectations. Although nearly 75% of minority students have high expectations for their futures, most teachers and principals do not (Galley, 2001; Seiler, 2001). Many urban teachers consider low-income urban families to be generally deficient (Davies, 1987). Students sense these low expectations by teachers (Galley). The unintended indignities that accompany this culture of low expectations restrict students' ambitions and produce a deficiency model that contributes significantly to urban students' poor academic performances and high drop-out rates (Tobin et al., 2001; Valencia, 1991). This deficiency model often expresses itself through a cycle of blame; teachers blame parents for inadequately prepared students (Cullingford, 1996) as parents blame schools and teachers for their children's poor grades (Barton, 2001). The deficiency model also invariably involves "dumbing down" the academic content of courses, leaving graduates unprepared for college. This is common throughout the country. For example:

1. In several urban public colleges, many students need remedial courses even though they have successfully completed college preparatory courses. In New York, only 13% of City University of New York (CUNY) community college students pass academic skills tests that measure 11th grade proficiency. Many students fail high school courses, but somehow get a C on their report cards (Hoyt & Sorensen, 2001). Not surprisingly, these students have trouble when they enroll in college. For example, most of the freshmen in the California State University System who flunk the English placement exam had B averages in high school English ("Many freshmen unprepared," 2002).

2. Nationwide, almost 30% of all freshmen need remedial education at four-year colleges and universities. At community colleges, the rate exceeds 40% (Ignash, 1997). College remediation rates for students are 46% in Maryland and 60% in Florida. In the California State University System, 47% of its 23,000 freshmen take remedial English, and 54% take remedial math (Hoyt & Sorensen, 2001). At some California campuses, 80 to 90% of freshmen need remedial education, despite the fact that the system is supposed to accept the top 30% of the state's high school graduates (California Community Colleges, 1995; Hoyt & Sorensen). These students pay more than $12 million per year for courses that do not count for graduation. These courses, in addition to being expensive, are time consuming and contribute to college drop-out rates; students often get discouraged that non credit "remedial" courses increase their debt and lengthen their college careers ("Many freshmen unprepared," 2002).

The deficiencies of low expectations help explain why urban students are disproportionately routed into low-level classes (Oakes, Gamoran, & Page, 1992). The low-track science courses that many urban students take, if they are not told to avoid science altogether, focus on behavioral skills and static conceptions of knowledge and often include no science whatsoever (Page, 1989, 1990). To close the urban achievement gap, we must increase our expectations of urban students by offering more rigorous and relevant courses, integrating all students into content-rich courses, ensuring that all students have an equitable opportunity to learn, and requiring students to learn before they can graduate.

Curriculum. Less than 25% of minority students describe their school's curriculum as challenging (Galley, 2001). They are correct; today's urban students encounter curricula that include many lower-track courses and virtually no advanced math and science classes (Ingersoll, 1999; Viadero, 2001a, 2001b). If we are to expect urban students to learn as much as their suburban counterparts, we must expose them to a rigorous curriculum. When urban students have increased their academic performance, the increases have been correlated with more rigorous courses, increased instructional time in science and mathematics, and the presence of more qualified teachers (Henry, 2001b). *All* students benefit from taking more rigorous courses (Adelman, 1999). This is why urban students improve their academic performances when they are exposed to a challenging curriculum (Henry).

Professional development. Improving the rigor of the curriculum must involve professional development programs that help teachers improve not only their content knowledge of science, but also their abilities to teach inquiry-based science education and understand the importance of cultural and linguistic aspects of urban science education. Programs that have emphasized these aspects of professional development have decreased the achievement gap that characterizes urban schools ("Inner-city students," 2001). This type of professional development is critical, for most science teachers in urban schools do not know how to work effectively with students having special educational needs, limited language skills, or culturally different backgrounds. Nevertheless, these are the topics that are least common in current professional development activities for urban science teachers (Wenglinsky & Educational Testing Service, 2000). To close the urban achievement gap, we must offer urban students a challenging curriculum.

Summary

Despite good intentions and decades of educational reform, there are huge inequities in the education of low-income urban students (Barton, 2001). Many of these inequities in urban education are rooted in the struggle for racial equity, socioeconomic opportunity, and a more equitable distribution of resources (Barton). Thus, our work to remedy the inequities that now characterize urban science education must be based

on a larger commitment to social justice. If the oft-touted "science for all" (American Association for the Advancement of Science, 1989) is ever to be an achievable commitment to equity rather than pious, abstract, and often fictitious platitudes, we will have to change our policies, priorities, and funding mechanisms for urban schools. We cannot afford to continue to accept the fact that many large urban high schools are "pathways to nowhere" (Wear, 2002, p. 16).

The crisis in urban science education requires results-oriented action because it is crucially important for society. Indeed, our nation cannot continue to prosper if we do not create a generation of educated citizens who more closely represent the demographic of American society.

"Science for all" (American Association for the Advancement of Science, 1989) begins with equitable access and opportunity for all. As noted by Robert Moses, a former civil rights activist and current president of the Algebra Project (Moses & Cobb, 2001),

> The most urgent social issue affecting poor people and people of color is economic access. In today's world, economic access and full citizenship depend crucially on math and science literacy. I believe that the absence of math [and science] literacy in urban . . . communities throughout this country is an issue as urgent as the lack of registered Black voters in Mississippi was in 1961. (p. 5)

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Saving the "False Negatives": Intelligence Tests, the SAT, and Developmental Education

Randy Moore
Murray Jensen
Leon Hsu
Jay Hatch
General College, University of Minnesota

The unequal opportunities that often typify public K-12 education produce many students who are "false negatives"; that is, students who are capable of succeeding in college but who are denied a realistic chance to do so. The current use of the SAT, a dominant force in college admissions, is often a primary means of denying a realistic opportunity to these false negatives because it strongly favors students who attend well-funded schools and who can afford SAT preparation courses. Developmental education programs that focus on identifying and nurturing false negatives, the many students who are capable of succeeding in college despite poor SAT scores, can increase the graduation rates of these students.

Intelligence tests were invented in 1905 by French psychologist Alfred Binet. Binet wanted to use the tests to improve people's potentials by determining whether an individual needed remedial education (Perdew, 2001). Binet feared that his tests would be misused if the scores were used to pejoratively label rather than identify students needing help (Gould, 1981; Owen, 1985). Almost immediately, those fears were realized when a variety of people began using Binet's tests to label people, promote racism and eugenics, and exclude "undesirable" people from opportunities. The following are examples of realizations of Binet's fears:

1. Henry Goddard, who translated Binet's work into English in 1910, and other eugenicists used intelligence tests to label people as "morons" and "feeble-minded." Goddard argued that low test-scores were permanent, hereditary, and linked to immorality, delinquency, and crime, stating that "every feeble-minded person is a potential criminal" (Freeman, 1926, p. 427). He believed that people with high test scores should have better homes than people with low scores (Owen, 1985). Goddard also believed that a person's intelligence was hereditary, that people with low test scores should not be allowed to reproduce, and that society needed "to protect itself against the feeble-minded" (Pintner, 1922, p. 153; also see Freeman; Goodenough, 1949; Gould, 1981).

2. Stanford University professor Lewis Terman, another eugenicist, believed that people who scored low on intelligence tests were poor workers and irresponsible citizens who should not be allowed to reproduce (Gould, 1981). Terman, Joseph-Arthur Gobineau, who has been referred to as "the grandfather of modern academic racism" (Gould, 1995, p. 12), and others used intelligence tests to argue that there are innate, unchangeable differences in intelligence and morality in various races (Gould, 1981, 1995). Hitler used Gobineau's ideas to support his ideas about race. Like Goddard, Terman later recanted his claims.

3. Army Mental Tests were developed by Terman, Goddard, and others during World War I (Owen, 1985). Scores on the tests were used to argue that women and minorities had unchangeably lower intelligence than White males (Freeman, 1926; Whipple, 1922).

4. Princeton psychologist and eugenicist Carl Brigham also believed that test scores indicated unchangeable levels of intelligence. Brigham used test scores to argue in 1923 that immigration should be stopped to end "the propagation of defective strains in the present population" (Owen, 1985, p. 178). In 1925, Brigham used Army Mental Tests as a basis for developing the Scholastic Aptitude Test (SAT) for the College Entrance Examination Board. Brigham's use of Army Mental Tests also led to the passage of the Immigrant Restriction Act in 1924, which limited the number of immigrants (Gould, 1981). By 1930, however, Brigham had renounced his claims.

5. Henry Chauncey, the first president of the Educational Testing Service, believed that intelligence tests should be used to regulate people's access to institutions and professions, and thereby help deserving people succeed and undeserving people fail (Gould, 1981; Owen, 1985).

6. More recently, Hernstein and Murray (1994) have claimed in *The Bell Curve* that SAT scores, among other data, link ethnicity to intelligence.

Although such uses of intelligence tests to support racism and other societal ills are not as blatant as they once were, they continue in more subtle ways. For example, the SAT is often used to block the access of many capable students to college, and thereby to a realistic chance at obtaining college degrees. We call these blocked students "false negatives" because they are capable of succeeding in college, but are often denied a plausible chance to do so by standardized tests such as the SAT.

The SAT

The debate about the use of standardized tests in education was reignited in early 2001 when University of California president Richard Atkinson recommended that the University of California no longer require the SAT for its 178,000 students (Marklein, 2002a). The SAT was first used in 1926 (Crouse & Trusheim, 1988), but became the dominant measure for college admissions in the 1960s when the University of California, the nation's largest public university system and the SAT's largest market, became frustrated with the unreliability of high school transcripts and began requiring SAT scores from all of its applicants. Other colleges and universities soon followed. Admissions officers accepted the claim that the SAT identified the most intelligent students.

Today, the SAT, which is owned by the College Board and created by the Educational Testing Service, is a dominant force in college admissions. Whereas 33% of high school graduates took the SAT in 1980 (Henry, 2001b), 45% (i.e., 1.3 million) of college-bound seniors took the SAT in 2001. Many others took the somewhat less popular ACT (Draper, 2001; Gehring, 2001a). More than one third of these students in 2001 were ethnic minorities (Smetanka, 2001). The overwhelming majority of the nation's 2,083 four-year colleges and universities make the SAT a requirement for some or all applicants (Cloud, 2001).

The SAT was originally a modification of the Army Intelligence Test. Unlike the American College Testing Program (ACT), which purports to measure students' mastery of subject matter (i.e., English, mathematics, natural science, and social studies), the SAT claims to measure innate intelligence and aptitude (Lemann, 2001). According to its advocates, the SAT's idiosyncratic questions of students' verbal and mathematical reasoning skills mark merit and thereby enable college admissions officers to identify promising students. It is the SAT, an IQ test that measures students' ability to learn, that often determines who gets the chance to enter the four-year college of their choice.

Do the SAT's Claims Match the Results?

Although the College Board tells parents and students that colleges use SAT scores "to help estimate how well students are likely to do" in college ("Can the SAT," 2001), the validity of the SAT as a predictor of college success is controversial. Some studies report that SAT scores are good indicators of how students will perform in college, but other studies report that they are not (Draper, 2001; Freedman, 2001; Gehring, 2001b; Kohn, 2000; Kozol, 1991; see review in delMas, 1998). There are many "false positives," that is, students who do well on the SAT but do not graduate from college. Similarly, there are also countless "false negatives," that is, students who graduate from college despite the fact that their SAT scores are low. These observations have led several critics to conclude that SAT scores are poor predictors of how well students will perform in college, or, in fact, how they will do

in even their first year of college (Kohn). Moreover, many critics claim that our current emphasis on SAT scores diverts attention from the many social, economic, cultural, and political factors (e.g., family background, familiarity with English) that condition academic performance (Kozol). An SAT handbook admitted in 1999 that the SAT has a lower predictive accuracy for success in college than a student's high school grades (Freedman). Others have reached similar conclusions (Perez, 2002).

There are several other problems associated with emphasizing the SAT as a primary criterion for admission to college. For example,

1. The SAT apparently discriminates against women, ethnic minorities, and nontraditional students; that is why these students score lower on the SAT than do traditional students. For example, in 2001 males outscored females by 42 points on the combined verbal and math portions of the SAT, up from 38 points in 2000, despite the fact that females outperform males in high school (Gehring, 2001a; "SAT gender gap," 2001). Similarly, African Americans who took the SAT in 2001 had an average score of 859, down 13 points since 1991, whereas White students averaged 1060 on the exam, a 39-point increase since 1991 (Gehring, 2001a). For comparison, students who identified themselves as Asian American or Pacific Islander scored 1067 on the exam ("SAT scores," 2002). Although the large gap in SAT scores between African Americans and Whites is statistically significant, it is not always predictive of collegiate success. Indeed, SAT scores are not associated with the success of African-American students in college (Boylan, Saxon, & White, 1994; Moore, 2002). As Sacks (2002) concluded, "The SAT and similar college entrance exams . . . are sorting devices for the bureaucratic convenience of college admissions officials, tests that sort viciously by class and race, and tests that aren't particularly good predictors of college performance" (p. 32).

2. The SAT *is* a good measure of a student's ability to take the SAT. The SAT is coachable; that is, taking the SAT is a skill that a student, depending on his or her bank account, can learn in an SAT coaching class (Gladwell, 2001). No one, not even the College Board, claims any longer that the SAT measures aptitude. That is why its name was changed; the College Board quietly announced a few years ago that the A in SAT no longer stood for Aptitude. Today, SAT is no longer an acronym; the letters do not stand for anything (Kohn, 2001).

3. When faced with varying grading standards in different high schools, many university admissions officers have claimed that the SAT provides a fair and common yardstick for judging students. However, many people who have examined the evidence disagree with this claim. For example, William Hiss, the former dean of admissions and financial aid at Bates College, argues that standardized tests do not provide such a measure, but instead "significantly under-represent the potential of up to a third of the applicants. It is what a statistician would call a 'false negative,' causing colleges to deny admission to students who will succeed" (Hiss, 2001, p. 10).

4. For at-risk students, only the student's high school grade point average correlates significantly with the student's first-year academic success (delMas, 1998).

5. The tremendous emphasis that college admissions officers place on SAT scores truncates applicant pools (Hiss, 2001) and causes many students to endure much stress and spend inordinate amounts of time preparing for the test (e.g., taking preparation classes for years, taking various early versions of the SAT, visiting SAT storefront "learning centers," studying for the test, etc.). This distorts educational priorities by taking students' time away from their regular assignments. Stress can be a strong incentive for diligence, but, as Atkinson notes, "America's overemphasis on the SAT is compromising our educational system" (Kohn, 2001, p. B12).

These concerns have prompted more than 300 colleges and universities to drop their SAT requirement. Doing this has made little difference in the academic quality of the schools' students. Moreover, schools that no longer require the SAT (e.g., Bowdoin, Bates, Mount Holyoke Colleges, Connecticut) report that "applicant pools and enrolled classes have become more diverse without any loss in academic quality" (Hiss, 2001; Kohn, 2001, p. B12).

SAT Scores and Minorities

The current use of the SAT tests seemingly discriminates against African Americans and Hispanics, who score significantly lower than White and Asian

American students (Gehring, 2001a; Selingo & Brainard, 2001). For example, only about 1.7% of African American students who take the SAT score above 600 on the verbal part of the test; the percentage of White students who score above 600 is 9.6%. These data suggest that differences in SAT scores between Whites and African Americans are not due to socioeconomic status alone; on the contrary, the tests may also be culturally biased. However, others claim that the unequal outcomes report unequal opportunities. For example, College Board president Gaston Caperton believes that the gap in test scores results from "different educational opportunities these students have had" (Cloud, 2001; "Is the SAT fair," 2001). This conclusion is consistent with the observations that (a) all students (i.e., males and females across all racial and ethnic lines) score better on the SAT if they have taken advanced-level courses (Gehring, 2001a); (b) minorities and students from low-income schools seldom have access to such courses because these courses are often expensive (Cloud, 2001); and (c) low-income and minority students often do not take advanced courses even if they have a chance to do so (Viadero, 2002). Thus, these students' lower scores on the SAT may simply reflect decreased opportunity rather than lower innate intelligence. This also helps explain the many false negatives, as well as why these students, when they are given a realistic chance, can often succeed in and graduate from college. As Caperton has noted, "These differences are a powerful illustration of a persistent social problem in our country: inequitable access to high-quality education" (Gehring, 2001a, p. 17).

Instead of contributing to the diversity of the student population, the ranking associated with current uses of SAT scores often obscures the social forces that help some entire populations succeed while helping others fail. As a result, the testing system validates systems of privilege and endorses entrenched patterns of discrimination. As noted recently by Maria Blanco, an administrator with the Mexican American Legal Defense and Education Fund, the SAT "has turned into a barrier to students of color" because "it keeps out very qualified kids who have overcome obstacles but don't test very well" (Kohn, 2001, p. B13). Clearly, our educational system does not provide all students with the same chance to excel on the SAT.

The many established rituals associated with testing and ranking make the successes of the largely upper-class populations who occupy the highest and most influential positions in education appear to result only from individual achievement and prowess rather than social privilege. This allows admissions officers and other administrators to ignore troublesome questions about inequitable distributions of resources, unequal access, and unequal opportunity. Yet the facts remain: African-American students score significantly lower than White students on the SAT, just as African-American students in grades K-12 (a) are classified as needing "special education" courses significantly more often than are White students; (b) are less likely to be mainstreamed after taking "special education" courses than are White students; (c) are significantly more likely to be labeled as "mentally retarded" than White students (Fine, 2001); (d) are almost two times more likely to be taught by ineffective teachers than are White students (Henry, 2001a, 2001b); and (e) are significantly more likely to drop out of school than White students (Boylan, Saxon, & White, 1994; Moore, Jensen, & Hatch, in press).

SAT Scores, Labels, and Money

The SAT is often a better measure of resources than aptitude or innate intelligence. There is a strong correlation between a student's family income and the student's SAT score; that is why real-estate values in suburbs vary with SAT scores at local high schools (Lemann, 2001). When test takers are grouped by income as measured in $10,000 increments, SAT scores increase with each jump in parents' income ("1999 college bound seniors," 1999). That is, when income goes up, SAT scores go up. This is why even the strongest supporters of requiring all college applicants to take the SAT begrudgingly admit that "class has some relationship to SAT performance" (Crouse & Trusheim, 1988; McWhorter, 2001, p. B12). These results support Owen's (1985) claim that test scores are "little more than camouflage for class" (p. 198). The SAT may be a good measure of the size of a student's house, but it does not measure student intelligence or mastery of a subject. African Americans, who are three times more likely to be poor than Whites and 2.4 times less likely to have annual incomes exceeding $75,000 ("Why are Blacks," 2001), score significantly lower on the

SAT than do Whites. Nevertheless, SAT scores are not associated with the success of African American students in college (Boylan, Saxon, & White, 1994).

The economic disparities that accompany differences in SAT scores result partly from a sprawling $200 million industry that—for a hefty price—helps affluent students score better on the SAT (Freedman, 2001). About 10% of students who take the SAT sign up for commercial coaching programs, which cost $700 to $3000 per course or up to $450 per hour for an individual tutor ("SAT prep courses," 2001). A course that costs $2700, such as the one offered by the Huntington Learning Center, consumes about 10% of the total annual income earned by the average African American family in the United States ("SAT coaching costs," 2002). Kaplan Educational Centers, whose SAT preparation course lasts three months and costs $800 to $900, claim that their courses increase students' SAT scores by an average of 120 points ("SAT prep courses"), and that more than a quarter of students increase their scores by at least 170 points ("SAT coaching costs"). Similarly, the Princeton Review claims that its SAT preparation class improves scores by an average of 140 points ("SAT coaching costs"). Even the College Board admits that SAT pre-classes improve students' scores ("Is the SAT," 2001); that is why more than half of the people who take the SAT take it again, often after taking an SAT prep course, and why the College Board sells its own SAT preparation materials marketed with the tag line "Test Prep from the Test Makers" ("California and the SAT," 2002; Freedman, 2001; Gose & Selingo, 2001). The "new" and more expensive SAT, which will include a writing sample and is scheduled to be implemented in the spring of 2005, will almost certainly increase the demand for SAT preparation courses (Hoover, 2002). On average, students who cannot afford SAT prep courses do not do as well on the SAT as students who can.

Students from affluent schools, which are usually suburban and enroll disproportionately small percentages of ethnic minorities and students from low-income families, score higher on the SAT than do students from less affluent schools. As has been noted by Duke University admissions director Christoph Guttentag (Galley, 2002, p. 10), "The students in school districts with more resources will be more equipped" to succeed on the SAT. For example, (a) students in poorer schools are also much more likely to believe that their schools are not clean, safe, and quiet enough for them to concentrate; and (b) poorer high school students "believe that their schools are not helping at all to prepare [them] for a successful future" (Galley, 2001, p. 10). Moreover, low-income schools and low-income students can seldom afford the added expenses that accompany Advanced Placement (AP) courses; AP tests cost $78 each (Harrington-Lueker, 2002). This is why (a) schools' offerings of AP courses decrease as the percentages of minorities and low-income students increase (Cloud, 2001), and (b) African Americans comprised only 4% of the students who took the AP tests in 2000 (Henry 2001a). The decreased levels of academic opportunity at schools serving large percentages of low-income and minority students produce disproportionately large percentages of students who score "below basic" on standardized tests (Kozol, 1991; Olson, 2001). *All* students benefit from a rigorous curriculum and advanced courses (Adelman, 1999), but many students, especially ethnic minorities and students from low-income families, do not get the chance (Borja, 2001).

Students, and especially ethnic minorities, who attend poor schools and who come from low-income families, often score poorly on standardized tests such as the SAT. To many, these students comprise an academic underclass who are labeled "at risk," "not ready for college," and in need of "remediation" to correct the alleged "learning problems" that caused their low scores. This prejudicial stigmatization of at-risk students does more than rationalize the privileges of the economic and academic elite; it also interferes with students' learning and produces a variety of damaging and undeserved misconceptions—for example, that the students do not try, do not participate in class, have uncaring parents, are dumb, cannot be helped (e.g., "we can't save them all"), and should be put in "special ed" courses (Marriott, 2001; Valeri-Gold, Callahan, Deming, Mangram, & Errico, 1997). Placing these labeled students in remedial courses often worsens the problem because such placement is often accompanied by the instructors being poorer teachers, by the teachers and students having lower expectations, and by the students having low self-esteem (Atwater, 1994; Lavin, 1996; Samuda, 1986). This is especially true in K-12 schools having large populations of

minority students. In such schools, (a) only 40% of the teachers and just over half of the administrators have high expectations for students' futures, and (b) only 25% of secondary school students believe that their teachers have high expectations for them (Galley, 2001).

The placement of students in remedial classes is especially damaging to minority students because it perpetuates the ethnic and socioeconomic segregation and imbalance of many educational programs (Atwater, 1994). Samuda (1986) refers to this ability grouping (i.e., including the mindset that all students must be judged according to the same standards, procedures, and values regardless of cultural or class differences) as structural racism. It is difficult to see how labeling and placing students in remedial courses can be a better alternative to the opportunity to succeed in a traditional content course.

What Happens to At-Risk, "False Negative" Students?

The false negatives that we are concerned about are disproportionately ethnic minorities and students who are from low-income families. These students attend four-year colleges, including those having open enrollment policies, at about half the rate of higher-income students. Once there, these students graduate at significantly lower percentages than do their richer classmates (Advisory Committee on Student Financial Assistance, 2001). Similarly, African American and Hispanic students in developmental education programs at four-year colleges are retained at significantly lower rates than other students in developmental education programs. For example, more than 40% of White students at four-year institutions are retained, but only 37% of Hispanics and 33% of African Americans are retained at these institutions. At two-year institutions, 31% of Whites are retained; the retention rates for Hispanics and African Americans are is 22% and 17%, respectively (Boylan, Bliss, & Bonham, 1993; Moore, 2002; Moore, Jensen, & Hatch, in press).

Often unable to enroll in four-year colleges where they have the greatest chances for success (Moore, 2002), false negative students are often routed to community colleges and two-year technical schools. This is why enrollments of African American and Hispanic students in remedial courses at two-year schools are disproportionately high (Roueche & Roueche, 1993). Although the segregation of at-risk students in community colleges is a popular recommendation of administrators and faculty at four-year colleges, it is often "used by the four-year institution to avoid its responsibilities" (Carter, 1978, p. 97). Elite schools and others wanting to be elite schools do not want at-risk students on their campuses.

Community colleges provide training, continuing education, and potential access to higher education, all of which are critical to the success of students and communities. Indeed, community colleges educate 44% of all undergraduates taking courses for credit in the United States, 47% of all college students with disabilities, 51% of all first-generation college students, 46% of all African American, 55% of all Hispanic, and 46% of all Asian American and Pacific Islander college students (Briggs, 2001). However, community colleges and technical schools are often educational dead ends for low-income, at-risk students; there is a disproportionate elimination of Hispanic and African American students in developmental education programs at two-year institutions (Boylan, Bliss, & Bonham, 1993; Moore, 2002; Moore, Jensen, & Hatch, in press). This is why Hunter Boylan has noted that relegating developmental education students to community colleges "is not an educationally sound idea" (Stratton, 1998, p. 27). Students often cannot access four-year colleges through community colleges, and therefore have a significantly lower chance of graduating from college than do other students (Moore, 2002). As is true at four-year institutions, African American and Hispanic students in developmental education programs at two-year institutions are retained at significantly lower rates than White students (Boylan, Bliss, & Bonham, 1993). As a result, the odds of graduating from college are greatly reduced for students who score low on the SAT, come from low-income families, attend urban schools, or who are ethnic minorities. For example, in 1999 the nationwide college graduation rate for African-American students was 38%; whereas for Whites it was 59% ("Why aren't there," 2001). This denial of a realistic chance to obtain a college degree often consigns these students to low-paying jobs with declining real wages, and the cycle continues (Advisory Committee on Student Financial Assistance, 2001).

The disproportionate "weeding out" of ethnic minorities and low-income students—first by the SAT and then by the colleges that these students attend—contributes to the startling lack of diversity in many professions. For example, ethnic minorities have long been marginalized from science, and especially from disciplines such as engineering, physics, and computer science (Moore, 2001). Even the "best and brightest" minority students often avoid or are driven away from careers in science. Many of these students are discouraged from pursuing degrees and careers in science by counselors, parents, teachers, and scientists themselves, who, after seeing that the students scored poorly on the SAT, convince the students that they are not qualified for a career in science. Many of the remaining minorities and low-income students then suffer the same fate when they are, in effect, denied access to quality college educations by their ethnicity, socioeconomic status, or the low SAT scores that often result from the lack of opportunity that accompanies the students' ethnicity and socioeconomic status.

Providing Opportunity for False Negatives

Our experiences and research have convinced us that there are many students who are capable of succeeding in college, but who are inhibited from doing so by low SAT scores. We do not believe that all of these false negative students should be guaranteed a college degree, but they should have access to a realistic *chance* for success in college. A student's SAT score should not be destiny; a low score on the SAT should not necessarily mean that a student must give up on graduating from college, or that a chance to graduate from college should involve additional and unnecessary challenges such as a mandatory routing to a community college where the odds of success are very low (Moore, 2002).

A growing number of programs have been designed to help, rather than label and segregate, false negative students wanting a chance to succeed in college. For example, Texas, Florida, and California now admit large numbers of students to public institutions based on the student's high school rank; for these students, SAT scores are not considered (Gose & Selingo, 2001; Kohn, 2001; Marklein, 2002b; Selingo & Brainard, 2001). Students who strive are rewarded, and factors such as service and leadership (e.g., service as a class officer), adversity, and family history (e.g., being a first-generation college student) are also considered. Similarly, for more than two decades New York has used its Educational Opportunity Program to offer admission preferences along with developmental education programs to low-income students of any color (Freedman, 2001). Another promising approach involves the "Strivers" score, which is an adjustment to the SAT based on the taker's race and socioeconomic background. The ACT is developing a similar adjustment, but these adjustments are controversial (Glazer & Thernstrom, 1999).

Another successful program based on giving developmental education students access to college is the General College (GC) at the University of Minnesota. About half of the admissions into GC are based on an individual review process that considers test scores among several other performance indicators. As one would predict, the percentage of students of color in General College (i.e., approximately 32%) is almost triple that of the rest of the main campus (Smetanka & Baden, 2001), and these students' admissions scores are lower than are those of students in other colleges at the university. In GC, credit-bearing courses having traditional disciplinary expectations of content and rigor also include pedagogical approaches that emphasize and develop academic skills such as writing, reading, and critical thinking. These courses are supported by a network of academic advisors who work closely with faculty to anticipate students' problems and, when necessary, intervene. Also available in GC are academic services in which individualized help with writing, mathematics, and technology is available every day for students. Faculty in GC sponsor a research center (Center for Research on Developmental Education and Urban Literacy) and publish their research about developmental education.

GC's success rate is good. For example,

1. Almost half of the students who entered the University of Minnesota as new College of Liberal Arts students in Fall 1995 had received a bachelor's degree as of Summer 2000; for comparison, 49% of students who first entered General College and subsequently transferred to the College of Liberal Arts in Fall 1995 had received Bachelor's degrees from the University of Minnesota as of Summer 2000 (General College, 2002).

2. More than 75% of students who began in GC in Fall 1999 were still enrolled in the University of Minnesota in Fall 2000 (General College, 2002). Those retainees are disproportionately students of color. More than half of GC's students transfer into other colleges and graduate within six years (Smetanka & Baden, 2001; Wambach & delMas, 1996b).

3. Whereas 35% of GC freshmen transfer within the university, only about 8% of full-time community college students in Minnesota do so, suggesting that GC provides a higher rate of access to the university for at-risk students (i.e., students who score low on the standardized tests) than the state community college system (Wambach & delMas, 1996a, 1996b).

Clearly, GC has shown that developmental education and developmental education students can thrive at a research university, and that credit-bearing, first-year courses can promote skill development without lowering academic standards.

SAT Scores, Standards, and Access

Many elitists and elite institutions claim that ignoring SAT scores is equivalent to lowering standards (e.g., McWhorter, 2001). As Texas A&M University president Ray Bowen says, "I'm concerned that people who want to come to school here, who have high SAT scores, don't feel that they are diminished" (Selingo & Brainard, 2001, p. A22). Others have worried that eliminating the SAT will reduce standards because it represents "sort of an across the board access" to higher education (Selingo & Brainard, 2001, p. A22). However, critics have noted that the use of test scores to deny opportunity "is eugenics by other means" (Owen, 1985, p. 199) that propagates Goddard's belief that people with high test scores should have better homes than people with low scores.

The GC model that we advocate is not flawless; many of our students fail, despite our best efforts. However, the same is true for students in traditional programs who are not initially at-risk. Our success in identifying false negatives, including those having low SAT scores, is especially important because it enables large numbers of ethnic minorities, economically disadvantaged students, and first-generation students to graduate from college. This approach is based on the conviction that access to a first class education should not be reserved for the richest, brightest, and whitest students, or those who score highest on standardized tests such as the SAT. Yes, replacing the SAT requirement with Atkinson's "more holistic" approach to admissions *will* broaden the access of many students, especially ethnic minorities and students from low-income families, to a college education, but it will not diminish access for those now enrolled in college or reduce the quality of current academic programs (Marklein, 2002b, p. 1).

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Enhancing Literacy Through the Application of Universal Instructional Design: The Curriculum Transformation and Disability (CTAD) Project

Judith A. Fox
Jeanne L. Higbee
General College, University of Minnesota

This chapter describes the "Curriculum Transformation and Disability" project at the University of Minnesota, which was designed to enhance educational opportunities for students with disabilities by modifying curricula and teaching practices through the implementation of Universal Instructional Design (UID). The "universal" nature of UID does not imply that "one size fits all," but rather that learning can be universally accessible if faculty actively seek to provide an inclusive learning experience. Thus, this model can be used to enhance literacy for any underrepresented group in higher education, and can ultimately benefit all students.

A key factor in enhancing literacy is providing educational access to traditionally underrepresented populations. Some postsecondary institutions' definition of access begins and ends with the admissions process. As a result, the "open door" transforms into the "revolving door." If students who might be deemed "at risk" by institutions of higher education are not provided with adequate orientation and support, the odds are stacked against them. This chapter discusses a project undertaken by a large urban public research university to enhance educational opportunity for a specific target group, students with disabilities. However, the curricular transformation indicated by the application of Universal Instructional Design (UID) benefits all students. Furthermore, the educational model described in this chapter lends itself to adaptation at any institution that aims to be more inclusive, not merely in its admissions policies, but in retaining underrepresented populations by providing a curriculum that is responsive to the learning needs of all students.

Serving Students With Disabilities

The passage of key federal legislation has had an enormous impact on the success of students with disabilities at both the elementary-secondary and postsecondary levels. Section 504 of The Rehabilitation Act of 1973, which prohibits entities that receive federal funds, including schools, from discriminating on the basis of disability, opened up broad new avenues of access for students with disabilities. The Americans with Disabilities Act of 1990 extended these protections to the area of employment. As a result, students with disabilities have greater access to postsecondary education than ever before. However, although the population of students with disabilities on college campuses continues to increase, students with disabilities are still less likely than their peers to complete their education (U.S. Department of Education, 1999).

Educators interested in addressing the problems of retention and graduation rates have begun to examine how best to teach students with disabilities, only to discover a paucity of research on the subject. This has led some postsecondary educators to draw on research developed in other disciplines as they strive to make their classes more accessible (Johnson & Fox, 2002). The elementary-secondary inclusion movement, for example, offers a wealth of literature on adapting teaching practices to meet the needs of all students, including those with disabilities, much of

which can be adapted to the postsecondary educational environment (York, Doyle, & Kronberg, 1992; York-Barr & Vandercook, 1996). Multicultural education theories offer new models for addressing students' learning styles, cultural variables, and teacher expectations (Nieto, 1996), as well as arguing for new ways of assessing students' performance, which as Banks and colleagues (Banks et al., 2000) point out, can be affected by language differences, learning styles, and culture. Similarly, theories about learning styles offer perspectives on how people learn and encourage teachers to engage their students in a variety of ways to address a range of learning styles. Galbraith and James' (1987) model, for example, includes seven perceptual modalities based on the senses, which may provide useful approaches for teaching students who have sensory impairments (Higbee, Ginter, & Taylor, 1991). The recent rise of disability culture and disability studies presents another useful model, arguing for a broader definition of multiculturalism to include disability status, a shift that would encourage faculty to begin to think of disability as a difference. As Gill (1987) points out, most faculty still hold to the "medical model" (p. 50) of disability, which defines disability as an individual deficiency, rather than a difference deriving the interaction between the individual and society.

Educators also have looked to an unlikely source, the field of architecture, for research on how to make their classes more accessible, for it was in architecture that the model of Universal Design first gained popularity (Fox, Hatfield, & Collins, 2002; Johnson & Fox, 2002). This model argues that products and environments should be useable by all people without any specialized design (The Center for Universal Design, 1997). Designing a building with ramps or other accessible means of entry, rather than stairs, makes that building easily accessible to people using wheelchairs, pushing strollers, or pulling luggage. Just as better building design has created greater access, enormous advances in assistive technology have allowed students with disabilities to participate more fully in all aspects of higher education in unprecedented numbers (Knox, Higbee, Kalivoda, & Totty, 2000). For example, students who are blind can easily access and manipulate electronic text using screenreaders and scanners. Those whose disabilities affect motor function can use a variety of adaptive computer technologies, including voice-activated software, to control computer functions. Students with learning disabilities now have access to software that allows them to manipulate text and integrate study tools in order to capitalize on their learning strengths.

Recently, some educators have begun to synthesize this range of research and practice to advocate for the use of Universal Instructional Design. UID is a relatively new model that encourages faculty to make their classes more accessible by developing curricula that are flexible and customizable (Center for Applied Special Technology [CAST], 2001; Fox, Hatfield, & Collins, 2002; Johnson & Fox, 2002). Silver, Bourke, and Strehorn (1998), who first coined the term Universal Instructional Design, assert that the goal of Universal Instructional Design is to lessen students' need to rely on support services to receive their accommodations because many accommodations are built right into the course. However, they emphasize that the "Universal" in UID implies universal access, not a universal, one-size-fits-all, curriculum.

Curriculum Transformation and Disability Project

In response to the need for better faculty training on issues of disability in postsecondary education, staff from Curriculum Transformation and Disability (CTAD), a three-year, federally funded grant project, created a 12-hour, two-day faculty development workshop emphasizing the application of Universal Instructional Design (UID). Staff conducted a number of workshops in the upper Midwest at both two- and four-year institutions, working primarily with full-time faculty because of their presumed institutional longevity and impact. The workshop addresses a range of topics and provides faculty with a variety of experiences. Workshop facilitators alternate lecture, small and large group discussion, and a variety of application activities, modeling good teaching practices and Universal Instructional Design (Fox, Hatfield, & Collins, 2002). A brief summary of the workshop agenda follows.

Day 1 Workshop Agenda

Understanding disability. Facilitators outline general disability issues, focusing on issues related to hidden disabilities. They engage faculty in a discussion of meaningful access for students with disabilities and

introduce them to the "interactional model" (Gill, 1987, p. 50) of disability, which argues for seeing disability as a difference, rather than as a deficiency. Throughout this section, facilitators engage faculty in discussion and draw out their prior experiences with students with disabilities (Fox, Hatfield, & Collins, 2002).

Exploring legal issues. Facilitators of this section discuss Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the Individuals with Disabilities Education Act (IDEA; 1994), the three major laws affecting postsecondary educators. The discussion includes the legal definitions of disability, reasonable accommodations, mandated services, and appropriate accommodations. At the end of this portion of the training, faculty members apply their new knowledge in a case scenario specific to postsecondary education (Fox, Hatfield, & Collins, 2002).

Listening to student perspectives. Students with disabilities, previously recruited by the facilitator, discuss their experiences in postsecondary education in a facilitated discussion with faculty. When it is not feasible to gather a live panel of students, some facilitators employ a videotape of students with disabilities. This section has proved to be one of the most popular segments of the workshop. During later workshop segments, faculty and facilitators frequently refer to what the students say during this segment (Fox, Hatfield, & Collins, 2002).

An introduction to Universal Instructional Design. In this section, facilitators introduce faculty to the architectural concept of Universal Design by viewing a series of slides of well designed architectural features such as door levers; signage containing text, symbols, and Braille; adjustable laboratory and classroom tables; and power-assisted doors. Faculty practice identifying universally designed features on their own by touring the building in which the workshop is held (Fox, Hatfield, & Collins, 2002).

Next, facilitators introduce faculty to a set of "Principles" designed to help them apply Universal Design to the instructional environment. These Principles were synthesized from Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education and North Carolina State University's (The Center for Universal Design, 1997) Principles of Universal Design. The Principles are as follows:

1. Create a classroom climate that fosters trust and respect.
2. Determine the essential components of the course.
3. Provide clear expectations and feedback.
4. Explore ways to incorporate natural supports for learning.
5. Provide multimodal instructional methods.
6. Provide a variety of ways for demonstrating knowledge.
7. Use technology to enhance learning opportunities.
8. Encourage faculty-student contact (Johnson & Fox, 2002; Fox, Hatfield, & Collins, 2002)

Applying the Principles of Universal Instructional Design. Participants now begin to apply specific Principles of Universal Instructional Design to their own courses. First, facilitators and faculty discuss classroom climate, or what makes a course welcoming to all students. Next, facilitators work with faculty to help them understand the notion of "essential components," or the outcomes faculty expect for all of their students. Understanding what is essential in a course, and what is important, but negotiable, will help faculty to maintain high academic standards while considering some flexibility in assignments considered important but not essential (Fox, Hatfield, & Collins, 2002).

Day 2 Workshop Agenda

Learning about assistive technology. Depending on the local resources available to the facilitator, this section might feature a specialist in assistive technology talking about and demonstrating a variety of assistive technologies relevant to students with disabilities in postsecondary education. Alternatively, faculty may view a videotape covering many of the same issues. In addition, faculty members receive useful reference materials, such as guidelines for creating accessible web pages and lists of available resources (Fox, Hatfield, & Collins, 2002).

Investigating local resources. The facilitator of this section introduces faculty to the available resources at the workshop site, as well as the institution's Disability Services policies. This segment works best as a question-and-answer session with the local Disability Services provider (Fox, Hatfield, & Collins, 2002).

Working with case scenarios. In this section, faculty members work with a series of case scenarios that present them with a variety of situations involving students with disabilities in postsecondary education. They work through several scenarios in small groups, applying their newly acquired knowledge of Universal Instructional Design (Fox, Hatfield, & Collins, 2002).

Applying Universal Instructional Design (continued). Faculty members learn to apply the remaining Principles of Universal Instructional Design through facilitated discussion, group work, and application activities. This section is designed to allow faculty to share with each other their wealth of experiences (Fox, Hatfield, & Collins, 2002).

Creating an action plan. In this final, brief section of the training, faculty members create for themselves a series of "next steps," including the most important changes they plan to make in their own courses. Facilitators provide additional resources. The group discusses their action items (Fox, Hatfield, & Collins, 2002).

For information on how to obtain a complete set of workshop materials, including facilitators' notes, PowerPoint slides, videotapes, and handouts, please visit the Curriculum Transformation and Disability website (www.gen.umn.edu/research/ctad).

Project Outcomes

By the end of the project's second year, 73 faculty, administrators, and student services personnel had participated in CTAD workshops. Three-quarters of these were tenured or tenure track faculty; the rest held instructor, advisor, or administrative ranks. Project staff used a variety of methods to gather data for formative and summative program evaluation (Fox, Hatfield, & Collins, 2002; Hatfield, 2002). All faculty participants completed a workshop evaluation, the data from which was used to revise the workshop curriculum.

In order to capture the impact of workshop participation, staff asked all faculty to respond to a series of brief, open-ended questions, referred to as a "longitudinal progress report," several times per year (Hatfield, 2002). Staff also conducted interviews with self-selected faculty in an effort to gain more detailed reactions to their workshop experience. Data from these sources show that CTAD appears to have had an impact on "faculty's actions, attitudes and awareness," and has caused faculty to modify their instructional practices, including providing greater information access and redesigning instructional delivery, and to improve classroom climate (Fox, Hatfield, & Collins, 2002).

Fox, Hatfield, and Collins (2002) report that "Faculty took measures to promote information access in a variety of ways. In the progress reports, 31% (n=18) of faculty indicated making at least one modification to course materials in ways such as providing copies of lecture notes and overhead or Powerpoint information, reformatting course materials, and providing audiotapes of lectures." They report that 36% of faculty also used technology to promote greater access to information, including making syllabi and other course materials available in electronic format. Other faculty made their courses accessible by employing multimodal instructional methods. Further, many faculty more explicitly addressed a range of learning styles, making such changes as "balancing the modes in which information is presented, allowing alternative modes by which students can demonstrate knowledge, or including more multimedia in the classroom. For example, one participant noted a much greater use of visual stimuli, such as overheads, videos, use of whiteboard, and various props" (Fox, Hatfield, & Collins).

In addition, Fox, Hatfield, and Collins (2002) report that 26% of faculty modified their testing and assessment practices, choosing, for example, to administer shorter, more frequent tests with the intention of giving *all* students adequate time to complete the test. Longitudinal progress reports also indicated faculty had "a heightened sense of awareness regarding students' needs" as a result of the CTAD workshop. Finally, one third reported having taken steps to improve classroom climate, such as including a disability access statement in their syllabus, or verbally announcing their support for students with disabilities in their courses.

Project Success

Perhaps the most significant factor in CTAD's success has been that it is uniquely situated: although the project exists in a large, urban research university, it is jointly sponsored by an academic unit, the General College of the University of Minnesota, and a service unit, the University's Disability Services. This combination has allowed project staff access to an unusually high level of expertise and resources. The Project Director has the support of faculty in an array of disciplines; administrators who generously provide resources, including technology, space, and other administrative resources; and experts representing a variety of disability areas. The General College is committed to providing access to underprepared and nontraditional students through its developmental education mission. The National Association for Developmental Education (NADE) focuses on the promotion of the "cognitive and affective growth of all postsecondary learners, at all levels of the learning continuum" (NADE, 1995). NADE further asserts that "Developmental Education is sensitive and responsive to the individual differences and special needs among learners" (NADE, 1995). The mission statement of the General College (2002) reflects this definition of developmental education:

> GC provides an environment for a diverse population of students, faculty, and staff and seeks to encourage multicultural perspectives in its activities.
>
> GC enrolls, and prepares for admission to University degree programs, students who require special preparation because of personal circumstances or previous education.
>
> GC serves those students who can best benefit from their early integration into the University and who are willing to direct their energies to a rigorous baccalaureate education. Providing meaningful access to that type of undergraduate education offered in a major research university for students who are underprepared engages GC faculty and staff in their teaching, research, and service. (General College Mission, 2002)

Although it is important that this project was grounded in such a supportive environment, it is critical to note that project staff conducted workshops at seven different sites for faculty and staff with varying levels of knowledge regarding disability issues. This diversity of sites provided project staff with the opportunity to implement one of the most important principles of Universal Instructional Design, adaptability. Customizing each workshop meant addressing the particular needs of students, staff, and faculty at each location in an attempt to make each workshop meaningful.

Another major factor contributing to the success of this project was the staff's concerted effort to attain administrative "buy-in" at multiple points in the project. This included personal visits to each of the seven workshop sites well before the planned workshop, during which project staff, disability services staff, and administrators such as a Vice Chancellor or Provost met to discuss the workshop and potential benefits for the institution. Project staff found that getting administrative buy-in was particularly important to the success of the recruitment process. Some administrators assisted in writing the recruitment letter or targeting the potential pool of faculty; others went so far as to send out the recruitment notice on their own letterhead. Administrators and local disability services providers provided invaluable logistical support by securing space, arranging for food, and recruiting students to participate in a live student panel. An on-site disability services provider also served as one of several workshop facilitators. After the workshop, project staff shared evaluation data with all key administrators and disability services providers. When possible, project staff conducted focus groups with faculty and with students with disabilities at each site to determine relevant issues. The information gleaned from these focus groups assisted staff in adapting the workshops to the specific needs of each site.

A final contributing factor to the success of this project is that faculty self-selected into the workshops. At no time did administrators attempt to force faculty participation. In addition, participating faculty members received a monetary stipend for their participation in the two-day workshop and for agreeing to disseminate some of what they learned to colleagues, a requirement that currently is yielding some promising results, as faculty members begin to share, informally and formally, with each other. Although some may argue that allowing faculty to self-select into the

workshop creates an artificially "friendly" pool of participants, project staff strongly believe that "bottom up" dissemination of the ideas presented in CTAD workshops may well be more effective than "top down" policymaking, as faculty learn best from other faculty. The fact that faculty who did choose to participate tended to have an interest in broad issues of good teaching, even if they lacked knowledge of disability issues, means that these faculty may be predisposed to share their newfound knowledge with colleagues.

Application to Other Underrepresented Groups

To date the focus of the literature surrounding Universal Instructional Design has been on providing access for students with disabilities. However, the UID model easily lends itself to much broader application to ensure equal opportunity for all students (Barajas & Higbee, 2002). Factors such as gender, race, religion, home language, and social class must also be considered when designing curricula and pedagogies that respect individual differences. For example, when creating science laboratory activities, faculty might reexamine the essential components of the course. What elements are necessary in order to accomplish the course's goals and objectives? For a biology class, course content usually taught by means of animal dissection might be addressed via an alternate format such as a computer simulation. As a result, the lab would be more accessible to students with mobility impairments and may also enable participation by students whose religion prohibits dissection, as well as students who protest for ethical reasons (i.e., cruelty to animals). Just as accommodations and modifications can be made without jeopardizing course content and rigor in order to provide access for students with disabilities, by approaching curricular design critically and creatively, faculty can expand participation and eliminate some of the need for individual accommodations.

In order to promote literacy, it is imperative to engage all students in the learning process. Application of the principles of Universal Instructional Design encourages good teaching and opens doors to students traditionally excluded from higher education.

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Reflections: Experience Commentaries by Urban Developmental Studies Students

Maria Valeri-Gold
Carol A. Callahan
Mary P. Deming
M. Tony Mangram
Georgia State University
Maryann Errico
Dekalb College

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This descriptive study assessed the perceptions and experiences of 125 developmental studies students during their initial quarters at a commuter, urban, southeastern university. Students responded to ten prompts asking them to reflect on academic, social, family, and personal issues. Analysis of students' responses revealed that they experienced problems integrating socially with peers and with the institution. They encountered financial difficulties and felt personal, social, work, and academic pressures. Further analysis indicated that students did not understand developmental studies placement or the grading system. The results of this study will serve as guidelines for establishing retention programs.

Retention is a problem in higher education. Research studies on why students leave college are extensive, and researchers have provided educators with insight into what committed can do to improve retention rates (Astin, 1977, 1993; Pascarella & Terenzini, 1991; Terenzini, 1994; Tinto, 1987; Tinto, Russo, & Stephanie, 1994). Tinto (1987) reported that of the 2.8 million students who entered college for the first time in 1986, 1.8 million would leave their first institution without earning a degree. The American Council on Education (1995) noted that nearly 37% of students in open admission institutions dropped out before their sophomore year. Investigators conducted studies to identify the variables that lead to increased retention of college students. Researchers have used formative and summative measures to collect data on the demographic, individual, educational, academic, social, and commitment factors that contribute to retention rates (Cleveland-Innes, 1994; Kinnick & Ricks, 1993).

Retention models were developed for collecting qualitative and quantitative data to analyze why college students remain in school (Bean & Metzner, 1985; Gillespie & Noble, 1992; Kinnick & Ricks, 1993; Lyons, 1991; Pavel, 1991; Tinto, 1993). Additionally, standardized testing measures such as the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989) have been created to assess college students' attitudes, values, social, academic, and personal-social development and adjustment. Informal methods of assessment such as interviews, surveys, and focus groups have also been used (Lyons, 1991; Nordquist, 1993; Terenzini, 1994).

Researchers have found that students remain in college for various reasons. Tinto's (1975, 1993) retention model states that students stayed in college because they integrated personally, educationally, socially, and academically. Students were more inclined to remain in college when they developed

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academic and social goals and when they committed to a high quality educational program. They also made the transition from high school to college and integrated into the institution's ongoing social and intellectual life (Tinto, 1993). Fewer than 15% of student departures were the result of academic dismissal. Most students left voluntarily and had adequate to superior grade point averages (Tinto, 1987). According to Kalsner (1991), withdrawal decisions were based on personal, social, and financial problems. Pascarella, Duby, and Iverson (1983) tested Tinto's model with college students who attended commuter schools and found that persistence was an important predictor of student retention. Bean and Metzner (1985) noted similar findings with nontraditional students.

King (1992) found that academic advising played a significant role in retaining students. An integrated academic advisement, counseling, and admissions program that offered support programs and services helped retain students (Seidman, 1991). Establishing workshops for college students that discussed academic and social issues such as admission standards, programs of study, and financial concerns raised retention rates (Pascarella & Terenzini, 1992). Although few research studies addressed the effect of financial aid on retention, Voorhees (1985) found that the direct effects of financial resources on retention were significantly positive. Nora (1990) noted similar results with Hispanic community college students. She concluded that information regarding both financial aid availability and assistance in the completion of necessary forms and applications when made accessible to students and their parents affected retention.

The classroom teacher has a major effect on student retention. Students who interacted with their teachers developed a support network (Tinto, Russo, & Stephanie, 1994). In addition, the classroom teacher's instructional methods for presenting study strategies increased motivation for learning, fostered social and academic integration, and affected retention rates. Caprio (1993), working with freshman biology students, found that study groups, collaborative group projects, information-sharing, computer-assisted instruction, and field trips enhanced college students' understanding of the subject matter. Collaborative assignments fostered social and academic integration. Ashar and Skenes (1993) concluded that better retention rates were noted when students integrated socially with their peers.

Researchers generally agree that findings in the area of retention studies are institution specific. Tinto (1987) suggests institution type, setting, and student body composition are factors that cause variations in the rate of retention. A review of the literature revealed a scarcity of qualitative research in the area of retention. Pascarella and Terenzini (1991) concluded that qualitative and ethnographic research may produce improved information about students. They further predicted that such research would increase during the following decade and challenged investigators to use results to explain rather than simply describe the findings of their studies in higher education. Kinnick and Ricks (1993) stressed the importance of qualitative research in capturing the perspective and phenomenon of college experiences for the individual student by pointing out the importance of identifying local intervening variables that quantitative methods cannot uncover.

The studies conducted by Kinnick and Ricks (1993) at Portland State University, and the Prompts Project completed at Virginia Commonwealth University (Hodges, 1992; Yerian & Green, 1994) provided the framework for this study. These studies were of particular interest to the researchers because the institutions involved have a large, urban, commuter population as subjects. The time element of the Prompts Project was important because students' experiences could be captured as they occurred without the bias of hindsight. In his interview with Gail A. Kluepfel (1994), Michael Hovland, retention consultant, stressed the importance of early assessment of students, including academic and affective information. Thus, we conducted a descriptive study to assess the perceptions of developmental studies students in their initial quarters at a commuter, urban, southeastern university. After consultation with the local Office of Institutional Research, we designed this study to assess the perceptions and experiences of developmental studies students during their initial quarters of enrollment. The results of this study are specific to this institution and may direct retention planning in addition to contributing to qualitative research in the area of retention of developmental students.

Method

Participants

One hundred twenty-five developmental studies students in first-level composition classes participated in this study and were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992). Students enrolled in these developmental classes based on their scores on a national standardized admissions test and a state-mandated placement test.

Of the students in the study, 59% were female and 41% were male. Eighty-six percent were between the ages of 17 and 19, and 14% were over 25. Sixty-two percent were African-Americans, 24% were Caucasian, 6% were Asian, 3% were Hispanic, and 5% self-reported the category "other." Thirty percent were first generation college students. Sixty-six percent were enrolled in 11 to 15 hours of college courses; 34% were enrolled in less than 11 hours. Twenty-one percent worked 31 to 40 hours; 53% worked 20 hours or less; 26% did not work at all. Seventy-four percent lived at home with their parents; 26% lived on their own.

Instrumentation

We designed ten prompts asking students to reflect on and write about their perceptions and experiences of academic, social, family, and personal issues in their initial quarters at this university. During each of the 10 weeks of the 1995 academic fall quarter, developmental studies students in entry level composition classes free wrote their responses to one prompt. Journal writing, usually a component in composition classes provided a vehicle for these responses.

Procedure

During the first week of classes, we explained the purpose of the study to the students and secured their permission to participate. We administered a demographic questionnaire and the first prompt. Instructors then gave one prompt each week for the remaining weeks. We received permission to modify prompts used in a retention study for the Virginia Commonwealth University (VCU) Prompts Project (Hodges, 1992; Yerian & Green, 1994).

We designed a coding procedure, then five raters met each week for ten weeks to read, code, and categorize that week's prompt. Five model prompts randomly selected from the sample were duplicated for reading at each rating session. As an example of a session, the raters classified prompt one data according to "hopes, dreams, fears, and expectations." A miscellaneous category, termed "asides," was used to classify data that did not fit into the four main categories. Discrepancies in interpretation were discussed and negotiated. Then the prompts were randomly and evenly distributed to the raters in packs of 25 to be read and classified. Each rater tabulated the raw data and summarized the findings. At the next rating session, before examining the next prompt, the raters discussed any discrepancies discovered while analyzing the data. At the end of the study, each rater was assigned to recheck the data for two responses, summarize the results, and note trends. Finally, raters met to report the results of their two prompts and to discuss implications. Responses did not always total 125 because not all students answered all questions, and multiple responses existed for some questions.

Results

Prompt One

The first prompt stated, "You are here at the university. You've worked hard to get here. Write for ten minutes about your hopes, dreams, fears, and expectations for the quarter." The words hopes, dreams, fears, and expectations were not defined, nor the differentiation between the terms explained. Consequently, the data were coded as the students reported it. Overlaps may exist. An analysis of the responses to prompt one showed that students' hopes can be grouped into three categories: academic, social, and affective.

Academic hopes. Thirty-five students wanted to achieve As and Bs. Students' comments did not surprise the researchers because a number of students, even though they were developmental studies students,

attended college on a state-funded academic scholarship. This scholarship provides free tuition, fees, and a book stipend for any student attending a public state institution who earned a B average in an in-state high school. To keep the scholarship, students must maintain a B average in college. These students were realists, knowing that if they lost their scholarships, they would not be able to afford college.

Twenty-five students stated they wanted to exit developmental studies classes as soon as possible. A number of students viewed these classes as a waste of time and an embarrassment. Many students felt a strong obligation to finish college in four years and feared that developmental studies classes would slow them down. Other students expressed general academic hopes, such as "doing their best" and "becoming a successful college student," whereas 13 students hoped to improve specific skills such as reading, writing, and math.

Social hopes. Sixteen students reported they wanted to meet new people and to make new friends. Four students wanted to join clubs and participate in social activities. An analysis of their comments indicated that students wanted the university to provide them with opportunities to interact with their peers and to participate in campus activities and events.

Affective hopes. Twenty students addressed the need to stay focused, to persevere, to follow goals, to fit in, and to balance life's activities. Thus, affective hopes were closely related to academic aspirations.

Dreams. Students' dreams were future-oriented. Nineteen students described their dreams as working in their chosen profession as a doctor, lawyer, pilot, accountant, physical therapist, business owner, boss, or teacher. A few students mentioned wanting to become rich, and one student stated marriage as a dream. Five students expressed a desire to earn a degree, five dreamed of making all As, and seven hoped to learn specific skills.

Fears. More than 40 students shared how fearful they were of failing classes or of failing out of school entirely. Equally disturbing was the extensive list of personal fears: students were afraid of not being smart enough, being exposed ("others will think I am stupid"), losing focus or balance, depending on others, working hard, experiencing stress, adapting to a new environment, disappointing family members, dropping a class, losing hope, having poor skills, or being disliked.

Expectations. Students' expectations were academic in nature and primarily set in the near future. Thirteen of the students' responses indicated that they expected to exit developmental studies classes. Six students expected to set goals; nine, to work hard; four, to make good grades; and eight, to graduate. In addition, five students said they expected to join clubs; five, to participate in activities; and three, to make friends. Four students expected to receive help from faculty members. One student's response seemed to summarize the feelings of these freshmen during their first week in school: "I expect to take this quarter one day at a time because everything I do is overwhelming."

Sample student responses to the first prompt included, " I have found it hard to get around here . . . . The people that work in the library and that work in the (orientation) program haven't been the friendliest or very helpful." and "I hope that I maintain my endeavor to persevere in L(loser) S(sciences) English."

Prompt Two

The second prompt asked, 'What have you heard, seen, done, or had happen to you in these first two weeks at the university that has made the biggest impression?" In responding to this prompt, students' comments can be grouped generally into three categories: academic, social, and personal. Social and personal categories received 92 responses, while the academic received only 27. The greatest impact was noted in non-academic areas.

Academic impressions. Academically, 13 students praised the faculty mentoring they received and reported they were learning. Six students -gave high marks to the learning atmosphere, varied instructional techniques, and study skills suggestions. Nine students said that classes were not as hard as they had expected, and four students reported that faculty seemed more interested in teaching than they had expected because of what they had been told to anticipate by their high school teachers. Students praised study strategies, support services such as tutoring, the athletics study hall, and faculty assistance.

Six of the students who responded negatively reported that they felt trapped in developmental courses. Twelve students complained about the workload, stress, and the difficulty of trying to catch up with their assignments if they missed a class. A bad tutoring experience and an intimidating professor made major negative impressions. Both those students who were content and those who were not reported academic issues in terms of self-esteem. Students reported feeling inadequate, depressed, and disadvantaged by academic failures and those who were meeting academic success felt confident and enthusiastic.

Socially. 20 students found the student body friendly and liked the diversity and the downtown location of the campus. Others cited the number of clubs and organizations, live music on campus during the 10:00 a.m. institutional break, and recreational opportunities as social benefits. By contrast, four night students felt most campus activities were limited to daytime and thus were not as available to them. Fifteen students reported social concerns and three worried about their ability to make friends and how to handle their new freedom.

Personal impressions. In terms of interpersonal experiences, 14 students liked the student interaction; one, clubs; two, student unity; and two, racial harmony. However, student service areas produced 36 negative responses. Specifically, three mentioned slow registration, two had scheduling problems, two noted a lack of published information, and four reported poor student service. For instance, students did not like waiting in lines or being in a smoking atmosphere on campus. Twelve students complained about the slow processing of financial aid payments and 13 about the lack of adequate campus parking. Social and personal impressions outnumbered academic impressions.

Sample student responses to prompt two included, "Professors are not just here to get paid and "I'm glad faculty and staff do not look like they just walked out of Gone With The Wind."

Prompt Three

The third prompt inquired, "Classes have been in session for nearly a month. How are you feeling about being a student at the university? If you're feeling positive, why? If you're not, what's missing for you?" Researchers tallied 120 positive replies and 51 negative responses, perhaps indicating a negative shift in students' attitudes in the third week. Students who responded with positive statements noted classes and people. They were content, felt comfortable, and mentioned the diversity of the student body as a plus. Initial academic successes resulted in reported high self-esteem. Freedom from rigid, secondary school scheduling also appeared to be important to them.

However, of the 51 students who expressed dissatisfaction, 15 felt discouraged by developmental studies classes and continued to feel stupid because of their placement in the courses. The researchers felt that these comments were significant because the quarter was one-third over, and students continued to harbor negative feelings. Some students reported that the bookstore still did not have the books necessary for their classes. Time was a problem for some students: management, pressure, and slow adjustment to college. Students also missed their high schools and their friends. They experienced financial difficulties and felt drained of energy by course demands. Students reported that the university was too crowded. Parking was still a major issue. Dormitories, activities, time for activities, information sharing, assistance with financial aid, a "campus life," and football were missing from their college experience.

Sample student responses to the third prompt were, "I feel stupid in DS classes and don't know where I went wrong." and "The environment seems to only be made for 25 or older people." (Note: the average student age at the university is 27.)

Prompt Four

The fourth prompt noted, "It's midterm. Do you know what your grades are? Describe feedback you have received so far." Students' responses can be grouped into two areas: knowledge of their grades and feedback from their instructors. Sixty-one students said that they did not know what their grades were. Of these 61 students, only ten reported receiving any feedback from their professors. Many of the students did not know what their grades were in their courses. The phrases "I'm not sure," "I have no idea," "I guess," "I suppose," and "I don't know" were often used to describe what they knew about their grades. Students

did not know what the criteria for grading were, nor did they know how test and quiz grades related to their overall grades in their classes. These students reported getting less feedback from their professors. However, students who did receive feedback reported it as helpful.

Sample student responses to prompt four included, "I wish I knew what my grades were so I can see how much harder I need to work." and "My instructors have been detailed with me and my work as far as my strengths and weaknesses."

Prompt Five

The fifth prompt stated, "Life does not always go smoothly. Difficult situations such as the following happen to students, relatives, or friends: financial crisis, lack of adequate child care, involvement with alcohol and drugs, separation or divorce, relationship problems, health problems, and a victim of crime. Describe what kinds of difficulties you, your friends, or your family have experienced this quarter. What have you and they done to cope with these problems?" Students' responses can be grouped into two categories: financial concerns and relationship problems. Thirty-eight students reported financial problems such as not having enough resources to stay in school, pay for books, afford apartments, and enjoy social activities. Students often asked for financial assistance from parents, relatives, and friends, many of whom sacrificed resources to help them. Students also mentioned that they and their parents prayed to God for help during a crisis. Any external factor impacting on the student or family also affected the other.

Students desired a close, personal relationship, and they reported relationship problems with boyfriends or girlfriends. Twenty students stated that they, their friends, or family had relationship problems. The amount of time spent with boyfriends and girlfriends, strained dating relationships, and ending relationships was distracting and emotionally difficult.

A sample student response to prompt five was "My family and me had some financial crisis(sic) at the beginning of the quarter. My family had to get the bills paid for us to have the necessary utilities. Then I had to pay for school but I could only pay for so much. They had to find a way to get the bills caught up and help me with school."

Prompt Six

The sixth prompt sought information regarding contact with the faculty, asking "Have you spoken to your professors on a one-to-one basis? What issues have you discussed?" Sixty-three students had spoken to their professors on a one-to-one basis, while 49 students had not. Students who met with their teachers discussed academic issues such as grades, exit requirements, classroom assignments, tardiness, absences, classroom participation, study habits, time management, registration, and dropping a class.

Sample student responses to prompt six included, "I spoke to two of my professors about my progress in the class, my grades and participation." and "Yes, I have spoken to my professor. We have discussed my grades and progress in that class. She asked if I had any questions or comments about the class."

Prompt Seven

The seventh prompt addressed involvement in student activities. "Describe the opportunities for social life here at the university. Talk about the activities in which you participate. What other activities would you like the university to provide?" Students' responses can be grouped into three categories: the social activities available, the social activities they participated in, and the social activities they would like to have available. In response to category one, students stated that the campus offered opportunities for social participation, such as membership in fraternities and sororities, participation in sports (soccer, basketball, baseball, wrestling), and social clubs. care. Category two responses indicated that they did not participate in social activities offered on campus due to work and school demands. In answering category three, some students stated that they would like to have a football team on campus.

Sample student responses to prompt seven included, "I don't get involved because I am concentrating on my school work." and "A football team adds excitement and a sense of belonging, but it may be hard to gather a good team so late in the season."

Prompt Eight

The prompt administered in the eighth week read as follows: "Diversity has long been a distinctive

characteristic of this university. As a university student, react to this statement: Students of various racial and diverse backgrounds get along well." Responses indicated that 61 students agreed with the statement, and 35 disagreed. Four students stated racial harmony depends on circumstances. One repeated comment was that multicultural respect appears evident in the classroom, and students from different ethnic backgrounds seem to communicate well in school-related conversations. However, some students also observed that racial cliques seemed to form in social settings and during the 10:00 a.m. institutional break.

Sample student responses to prompt eight included, "Ethnic groups blend together. I chose this school because of its diversity. You don't have to have any social criteria." and "All I can say is that many races can interact and have friends from other races, but when it comes down to sticking together in racial situations, everyone sticks to their own race and forgets about friend- ship. Racial tension will always occur. People just need to know how to deal with it in a calm and mature way with communication instead of violence."

Prompt Nine

For the ninth prompt students were asked: "Describe what you need to help you be a successful student here at the university." Students' responses can be grouped into three categories: cognitive, affective, and external factors. Sixty-six students acknowledged affective variables and specific behaviors that contribute to success; 24 students saw their learning as the university's responsibility.

Forty-six responses indicated that students were cognizant of specific behaviors that contributed to their success. They expressed the need for better time management skills; the difficulty of balancing personal, social, and academic responsibilities was overwhelming. However, some students appeared to recognize the importance of prioritizing. Other students discovered the need to study more and develop effective study habits. Students gave contradictory responses citing both "great, caring professors" contributed to their success; "boring, disinterested instructors" hindered their progress. Other students acknowledged that resources are available; however, they had not utilized them. Many of the students noted external factors as obstacles to their learning such as poor living conditions, a stressful commute, an unreliable vehicle, and "stuck-up" women.

A problem that seems to be specific to this university is the impending conversion from a quarter system to a semester system. The decision had been finalized, and the transition had begun. Students felt this prompt was an appropriate vehicle to vocalize their concern. Many students saw the conversion as stressful and detrimental to their success.

Sample responses to prompt nine included, "Manage my time; stop being so lazy and waiting for the last minute to do things." and "Keep quarter system because students will be more stressed out, and they will drop out because of the work load."

Prompt Ten

During the last week of the quarter, students were asked to reflect on how their perceptions may have changed. The tenth prompt asked, "Think about what you said when you wrote the first week of school about your hopes, dreams, fears, and expectations. Compare your thoughts with the realities of your experiences. Talk about what may be the same and what may be different." Students had to rely on their memories concerning their responses to prompt one. Responses in general were shorter, as students recorded fewer specific hopes, dreams, fears, and expectations. It appeared that students may have tired of participating in the study at this point, or tired from the academic term in general and its various demands. Typically, prompt responses were shorter later in the academic term.

Hopes. Sixteen students claimed that their hopes remained the same. Students said that they had the same goals as in the beginning of the quarter. Six students listed nothing under the "hopes" category. Twelve students stated that they wanted to make good grades, As and Bs, while 35 stated in prompt one that they wanted to make good grades. Three students hoped to pass their classes, while two wanted to be successful, exit developmental studies, get a degree, and find a job.

Dreams. Students listed fewer responses in the dream category, but these results cannot be interpreted as students having fewer dreams. Rather, responses in

general, as mentioned above, were shorter, with fewer responses in each category (hopes, dreams fears, expectations). Three students dreamed of professions; while three dreamed of doing well in their classes. Others reported their dreams were the same: they wanted to pass their courses and graduate.

Fears. Students reported fewer fears at the end of the academic term. The fears students were still experiencing included being considered a freshman, earning low grades, failing classes and exams, not doing well in regular classes, losing their scholarships, and failing to make friends. Many students, however, wrote about having overcome their fears.

Expectations. Likewise, students reported fewer expectations at the end of the academic term. This change might be attributed to the way the prompt was written, asking students to compare their expectations from the beginning of the term to the present. As in the beginning of the study, however, students reported that they expected to do their best in classes, study hard, make good grades, exit developmental studies, and graduate. Students also expected to keep their scholarships and to have fun with their classmates and teachers. Some students had underestimated the difficulty of the work, and others wrote about dashed expectations of earning As and Bs, forming relationships, and exiting developmental studies.

Sample student responses to prompt ten included, "I did not do as well as I had planned for this quarter. I am about to write my exit exam for class and m average stands at 74. My other classes are okay, but after my calculations I am a couple of points shy of a B average to keep my scholarship." and "I had visions of not meeting people . . . I am continuing to reach people far and near . . . I was an inexperienced college student. Now, I can say that my feet have tested the waters and I am now ready to plunge in. "

Discussion

Social Integration

Previous researchers debated the importance of social integration. Pascarella, Duby, and Iverson (1983) and Pascarella and Terenzini (1991) stated that social integration at commuter institutions is not as important a factor for students leaving college as it is for students at residential institutions. In contrast, Terenzini, Allison, Miller, Rendon, Upcraft, Gregg, and Jalomo (1992) reported commuter students wanted to socialize, feel involved, and make out-of-class connections. In this study, students mentioned the importance of social integration early in their academic careers. The analysis of responses from prompts one (social hopes), two (social expectations; social impressions), three, seven, and ten (expectations) revealed that students wanted the university to provide opportunities for them to interact with peers and to participate in campus activities and events. Students stated that social activities existed on campus and opportunities for interaction were available, but they found it difficult to become involved in campus activities due to personal, work, and academic demands. Further analysis of replies indicated that students experienced external social problems, in particular, relationship problems (prompt five). Consequently, institutions might consider programs designed to foster social integration.

Financial Resources

Past studies confirm that financial resources affect student retention (Nora, 1990; Voorhees, 1985). The analysis of responses from prompts one (academic hopes; affective hopes), two (personal impressions), three, five, and ten (expectations) revealed that lack of financial resources worried students.

Pressures

Previous studies reveal that students felt overwhelmed and experienced stress from the pressures that were placed on them (Higher Education Research Institute, 1994), and they experienced "role overload" from school, family, work, and friends (Cleveland-Innes, 1994, p.424). "Role overload" refers to the increasing number of roles students are involved in as learners, workers, family members, parents, and friends as well as their inability to fulfill each role. In analyzing students' responses, they also experienced external pressures from family, school, work, and friends as indicated in response to prompts one, two, three, nine, and ten. Terenzini et al. (1992) reported that commuter students exhibited an emotional state of fear. In this analysis of responses, students revealed academic, social, and personal fears in their responses to prompts one and ten.

Teachers

The analysis of students' comments for prompts one and three revealed some negative perceptions about developmental studies programs. Previous studies indicate that the interaction between the classroom teacher and the student has major effects on students (Ashar & Skenes, 1993; Caprio, 1993; Tinto, Russo, & Stephanie, 1994). The analysis of students' responses to prompts one, three, four, and seven revealed that their interactions with teachers affected them personally and academically.

Locus of Control

Students' responses to all prompts indicated external locus of control. They attributed their success to parents, teachers, friends, and God. Smith and Price (1996), in their study on attribution theory, conclude that this is a common trait among developmental learners and call for attribution relearning, suggesting that educators and counselors train students to replace passive attribution that leads to continued failure. Increased academic effort can result in improved self-efficacy. The resulting shift to internal locus of control empowers students to become responsible for their own learning.

Implications

The results of this study have a number of implications for establishing guidelines for retention programs. Retention programs should be established based on student issues identified at each institution. Using formal and informal measures of assessment, institutions can establish retention programs that reflect the diverse student population.

Social integration is a concern of students. Faculty, staff, administrators, students, and parents can work together to create comprehensive in-class and out-of-class social activities and events that address the needs of the student population. Program developers need to be aware of the culturally diverse backgrounds of the students. Careful attention can be given to develop social experiences for both day and evening students.

Lack of financial resources affects students. The financial concerns of college students must be addressed early and continuously at each institution. Admissions counselors, financial aid officers, and academic advisors can develop workshops, seminars, or training sessions to discuss ways that students and their parents can finance a college education. High school counselors and college financial aid advisors can work together to assist parents and students in completing paperwork.

Fear is another factor that impacts students. Addressing students' personal and academic fears early in the academic term may reduce anxiety and stress. Instructors and academic advisors can encourage students to discuss their fears throughout the term. Establishing focus groups, conducting interviews, or forming mentoring programs may alleviate students' fears. Instructors can schedule conferences with students who are experiencing fears or refer them to trained professionals.

Students' academic perceptions of their teachers and developmental studies curriculum also have an impact. Negative perceptions of developmental studies persist and interfere with student learning. Admissions officers, academic advisors, and classroom instructors can offer seminars during freshman orientation week. These seminars may address the purpose of the institution's developmental studies program, its policies and placement procedures, and students' personal, academic, social, and financial needs.

Recommendations

1. Although this study is specific to a particular commuter university, it might be replicated at any postsecondary institution. The present study was conducted with a developmental studies population; a similar investigation should be conducted with a representative sample of an institution's total population consisting of both developmental studies and non-developmental studies students. Further analysis of demographic data, such as race, gender, age, and first generation status, might yield more information about particular groups of students.

2. Few studies have been conducted to identify the effects of financial aid on student retention (Nora, 1990; Voorhees, 1985). Researchers can conduct investigations on how financial aid affects students and their learning. The effort and stress involved in earning tuition and living expenses hinder time on task and prevent integrating socially with the institution.

3. Other informal methods of assessment, coupled with qualitative measures and open-ended responses, can be used to assess the personal, social, and academic factors that affect incoming first year developmental studies students and regularly admitted students. Specifically, interviews, focus groups, questionnaires, inventories, and surveys can help identify internal and external variables that affect students' adjustment to college.

4. In this study, students' negative perceptions of developmental studies seem to affect their self-esteem and learning. Additional research needs to be conducted to investigate students' perceptions of developmental studies programs and its effects on students.

Conclusion

From this study, the researchers agree that retention is a by-product of improving students' experiences in college, and it is not an end in itself (Kinnick & Ricks, 1993). Educators need to develop intervention programs early in students' academic careers to help them focus on the personal, social, and academic factors that impact their lives. These programs may include orientation courses (Salter & Noblet, 1994; Starke, 1994) or precollege orientation courses (Pascarella, Terenzini, & Wolfle, 1986). Such orientation programs can establish a bridge between students' needs and available campus resources. They can help students develop the necessary study strategies and time management techniques proven essential for college survival. The implementation of orientation programs needs to be unique to each institutions strategic plan, mission statement, goals, and curriculum.

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Developmental College Students' Negotiation of Social Practices Between Peer, Family, Workplace, and University Worlds

Richard Beach
Curriculum & Instruction, University of Minnesota
Dana Britt Lundell
General College, University of Minnesota
Hyang-Jin Jung
Center for Ethnological Studies, Hanyang University

Stereotypes and myths from popular debates about higher education continue to perpetuate inaccurate descriptions of students who participate in developmental college programs. Traditional research in developmental education lacks theoretical frameworks for describing the complex social practices that mark developmental college students' transitions from high school to college and construction of their identities as college students. This qualitative, descriptive study examined 14 developmental college students' experiences within and across high school, university, peer group, family, and workplace worlds. Students adopted different trajectories based on their cultural models of education and their abilities to negotiate the borders and barriers between these worlds, variations reflecting their sense of agency and differences in the quality of institutional support. Future research in developmental education needs to redefine academic success to include students' abilities to acquire social practices associated with their negotiation of the cultural disparities and similarities across different social worlds.

As a higher percentage of high school graduates attends college, many students are not deemed academically prepared to succeed at the college level. Traditional conceptions of these students in the past have perpetuated deficit models and definitions focusing on their "lack" of some kind (e.g., skills, grades, test scores), using terms such as "remedial" to describe the kinds of course work and programs that support their transition into higher education. These perceptions about students have persisted in popular debates across the educational continuum (Kozol, 1991; Rose, 1989; Roueche & Roueche, 1999), fueling primarily negative public stereotypes and myths about these students, equity of access, and the fundamental purposes of higher education.

Until recently, there has been little research conducted that effectively counters these perceptions with more accurate descriptions of developmental college students' academic socialization (Boylan & Bonham, 1992; Clowes, 1992). These students are often defined in reductionist terms based on institutional requirements such as high school rank and grade point averages, or by a university's annually fluctuating admissions standard, thereby creating inconsistent categories for labeling students that deny meaningful comparisons or singular definitions. Additionally, the programs and services serving these students vary greatly as well, depending on the context and needs of each institution or individual student, resulting in a rich "continuum of services" (Boylan as quoted in Lundell, 2000, p. 51) for a diverse and changing population of students.

Despite historically negative public perceptions about these students as remedial, there continues to be a large percentage of students in higher education who participate in developmental education programs and services. "Of the nation's more than 12 million undergraduates, about 2 million participate in developmental education during any given year"

(Boylan, 1999, p. 2). About one half of these students report that they use some type of learning support services, such as tutoring or learning centers (Boylan, 1995), and up to one third of all undergraduates take at least one developmental course during college (Boylan, 1999). Nearly all community colleges and over two thirds of universities offer developmental coursework, with most of them including additional learning support services (Boylan, 1999; Boylan, Bonham, Bliss, & Saxon, 1995).

Alternative Perspectives on Developmental Education

Students in developmental college classes are typically marked by the notion that they were underprepared in their high school courses and that for them to succeed in academia, they need a strong curriculum of "basic skills" instruction to bring them up to speed. However, an alternative explanation for their potential academic success focuses on these students' life experiences and ability to negotiate the competing demands of peer groups, work, and family on their academic work (Phelan, Davidson, & Yu, 1998).

Most of the research on developmental college students' academic socialization perpetuates a "conventional" perspective of student development (Stage, Anaya, Bean, Hossler, & Kuh, 1996, p. xii), replicating past models of learning and reinforcing existing knowledge of the impact of gender, race, ethnicity, and social class on students' educational achievement. Although more recent research has increased this knowledge base, specifically by expanding studies to include and examine sociocultural variables, a more "transformational" (p. xv) perspective emphasizes the centrality of students' perspectives on their experiences.

Many of the conventional perspectives defining developmental education are built on individualistic, psychological, and cognitive models of student development (National Association for Developmental Education, 1995), despite efforts within the field to disassociate from negative labels and educational models that reflect more remedial approaches. Additionally, research in the broader field of higher education lacks studies that focus directly on developmental college students, contributing to the conventional perception that students "lack" skills and require "basic" curricular interventions, without introducing new research that can transform these traditional models.

These conventional notions have been challenged by an increased focus on sociocultural issues impacting developmental education programs and students (Collins & Bruch, 2000; Lundell & Collins, 1999). Theoretical frameworks and research studies for developmental education are also expanding to incorporate interdisciplinary and multicultural perspectives (Barajas, 2000; Chung, 2000; Jehangir, 2000; Lundell & Higbee, 2000; Silverman & Casazza, 2000; Wambach, Brothen, & Dickel, 2000).

Another dominant perspective informing work in postsecondary developmental education and first-year students in transition assumes that students need to adopt the expectations and conventions of academic culture and the various discourses constituting disciplinary thinking (Bartholomae, 1993; Reynolds, 2000; Sternglass, 1997). Rather than perceiving developmental students as passive recipients of top-down, skills-building curricula, this work focuses on students' transformational transitions into academic cultures that may differ from the other cultures they inhabit.

However, these approaches to academic socialization often presuppose an "either-or" dichotomous analysis of the individual or the institution. On one hand, they may focus on the individual student as primarily responsible for his or her success in academia. If the student is struggling or does not succeed, it is assumed that it is that student who lacks motivation, interest, ability, knowledge, or social or cultural capital. On the other hand, analyses of student performance may focus on the problems or limitations of the bureaucratic institution as presumably failing to adequately foster student development. Tierney (1996) criticizes much of this work on academic enculturation as simply incorporating the language of anthropology to reinscribe our traditional notions of individuality and institutional-cultural reproduction. While discussing the "ritualistic" (Tierney, p. 283) nature of college students' transitions, much of the research continues to replicate the dichotomy of college as the cultural norm, and individuals who do not participate remain effectively outside this norm. Rather than this dichotomous view of success or failure on

the part of either the student or the institution, an alternative research perspective examines the highly interactional nature of students' worlds and realities (e.g., peers, family, work, ethnicity, gender, language, class) with institutional worlds (e.g., bureaucracy, teachers, standards, grades, courses)—all discussed within the wider social contexts and activities that shape them.

An Intercontextual Perspective on Student Development

An alternative, intercontextual perspective on student development focuses on the transaction between the students and the different worlds they inhabit—not only the university, but also their family, peer group, workplace, and high school worlds (Beach & Phinney, 1998; Floriani, 1993; Phelan, Davidson, & Yu, 1998; Sternglass, 1997). From this perspective, students are not only learning various academic skills, but they are also acquiring various social practices involved in negotiating the borders and barriers between these different worlds and in constituting multiple identity allegiances to and subjectivities within these worlds (Barton & Hamilton, 1998; Cairney & Ruge, 1998; Hannon, 1995; Street, 1995).

In proposing a "social practices" model of developmental education, Harklau (2001) posits the need to understand students' emic perspectives on distinct social practices acquired within different social worlds or micro-cultures. As part of their academic socialization, students learn that the same social practices are constituted and valued in different ways in these different worlds. For example, in Harklau's comparison of the same high school students' experiences in 12th grade and first year college classes, students indicated that note taking in high school was a highly structured and monitored practice, whereas in college it was assumed that students knew how to take notes. In high school, the prevailing cultural model was one in which the teachers often assumed responsibility for students' completion of their work, whereas in college, students perceived themselves as being responsible for completing their work. Learning to operate in these worlds involved learning to perceive valued social practices, for example, learning that sustained argument may be valued more in the academic world than in a family or even a workplace world. Given these competing value systems, students develop cultural models based on conflicts and tensions between different worlds. They may, for example, begin to value intellectual exchange or argument associated with the university world in resistance to the absolutist thinking prevalent in their home or workplace worlds (Durst, 1999).

Developmental college students also frequently face logistical disparities related to time conflicts between outside work and family responsibilities and course assignments (Schneider & Stevenson, 1999; Sternglass, 1997); the number of hours of outside work is a strong predictor of retention rates in developmental programs (Astin, 1993). Students from a low socioeconomic status (SES) also may not have adequate access to "means of cultural production" (Guillory, 1993) or "cultural capital" (Bourdieu, 1986) associated with acquiring social practices related to success in college courses (Soliday & Gleason, 1997).

It may also be the case that practices transfer successfully across different worlds when these worlds are congruent or overlapped (Beach, 2000). For example, an adult student who returns to college at age 30 may have acquired time management and organizational social practices in the workplace that merge well with similar expectations for completing assigned work in a college classroom. In discussing the notion of "co-genesis" between activities and worlds, Prior (1998) argues that practices in activities and worlds often overlap with each other as intersecting layers that influence each other in complex ways.

Thus, perceptions that all students in developmental education programs are underprepared or lacking skills is often erroneous and reinforces dichotomous views about the transferability of practices gained in other worlds, negating a more natural, congruent relationship that may exist between other areas of their lives and work valued in an academic setting.

An alternative developmental framework highlights differences in students' abilities to read and negotiate difference between social worlds. Based on high school students' perceptions of participation in different worlds, Phelan, Davidson, and Yu (1998) identified six different types of relationships between the world of family and peer groups and the world of school: "congruent worlds/smooth transitions; different worlds/border crossings managed; different

worlds/border crossings difficult; different worlds/border crossings resisted; congruent worlds/border crossings resisted; different worlds/smooth transitions" (p. 16). When worlds are perceived as incongruent, students perceive these borders as insurmountable barriers between worlds, particularly when they assume they lack the social or cultural capital (Bourdieu & Passeron, 1990) valued in academic worlds. Analysis of high school students found that when the family and peer group cultures were congruent, students had less difficulty succeeding in school than when the cultures were incongruent or conflicted (Cairney & Ruge, 1998; Davidson, 1996; Dias, Freedman, Medway, & Pare, 1999; Phelan, Davidson, & Yu, 1998). This suggests the need to identify students' perceptions of the points of incongruity between their worlds, how these incongruities affect learning, and strategies they employ to cope with these incongruities.

Students' Social Worlds as Activity Systems: An Activity Theory Perspective

Socio-cultural activity theory provides a useful theoretical perspective for examining the learning of social practices within and across these different, often competing worlds. Activity theorists define learning as acquiring experience through participation in activity designed to fulfill a particular object or outcome (Engestrom, 1987; Leontev, 1981). Activity theorists define an activity as the intersection between agents attempting to achieve objects or outcomes through the uses of certain tools. The object or outcome often involves changing or improving an activity, creating a motive for achieving that object or outcome. Through such participation, students acquire uses of various tools: language, images, genres, and so on, designed to achieve an object or outcome.

Focusing on activity as the primary unit of analysis examines how participants are driven by fulfilling certain objects or outcomes in an activity system or social world constituted by rules, roles, division of labor, and community (Engestrom, 1987; Russell, 1997). Activity theorists presuppose that actions are realized through incomplete, tentative intentions that stem from perceived contradictions operating in a system (Engestrom). A contradiction may include "differences between what [people] believe they need to know in order to accomplish a goal and what they do, in fact, know at any point in time" (Jonassen, 2000, p. 94). When participants are engaged with a range of different systems, or even within a system, they may experience competing objects or outcomes, resulting in contradictions between these systems.

Coping with Conflicts and Contradictions

In their experience of these different worlds, developmental college students experience various conflicts and contradictions given the competing objects or outcomes of different systems (Russell, 1997). For example, they are told via admissions policies that they lack requisite skills necessary for success in higher education, yet they perceive themselves as being successful in other systems. They may perceive their supportive small classes and advising as helping them succeed in their developmental program, but they may describe this experience as inconsistent with large, lecture-style instructional approaches employed in other units in the university, units for which the developmental education programs are preparing them. They may observe some peers or family members who do not have a college degree succeeding in the workplace world, success often assumed to be achieved only through obtaining a college degree, and this presents a contradiction in their own formulation of cohesive educational goals.

To cope with these conflicts and contradictions inherent in status quo activity, students participate in or create new, alternative activity through on-campus peer group or university "communities of practice" designed to address conflicts and contradictions (Engestrom, 1987; Wenger, 1998). In a recent study, Hispanic members of a college fraternity house actively assisted each other with their writing because they perceived the value of writing as central to success in college (Rodby, 1998). Because many of these Hispanic students were first-generation college students, they perceived completion of college as an important outcome of acquiring certain social practices such as assisting each other with writing. However, one of the students became engaged in political activities in California to the point that he lost interest in his academic writing. In this case, the object driving participation in a political movement became more important than the academic object of his composition class. This suggests that participants experience

conflicted allegiances given the congruencies across different systems. An astute writing instructor recognized the student's interest in political action and encouraged him to write about his experiences with his college peers as an intended audience (Rodby, 1998). The student then regained his interest in his writing and the class because he perceived the object of the course operating within the academic system as congruent with his participation in the political system.

Managing Congruencies and Overlaps

Students acquire various social practices and tools that serve to mediate the relationship between agents and objects, linking the agent to the activity's object or outcome (Vygotsky, 1978; Wertsch, 1998). During high school, students acquire genres as tools for negotiating the borders and barriers between school, home, peer-group, and workplace worlds. Analysis of California high school students from lower socioeconomic homes found that some acquired genres that helped them bridge gaps between the middle class culture of the high school and their home cultures (Davidson, 1996; Phelan, Davidson, & Yu, 1998). For example, a ninth grade, African American student named Johnny was adept at code switching in order to cope with competing allegiances to his African American peer group and his school work. With his peers, he employed genres associated with maintaining an image of being cool through his dress and demeanor of toughness. In the classroom, he employed genres of active participation in discussions, participation he derived from his interaction with peers, but concurrently was associated with an "academic identity" that stemmed from intrinsic motivation for academic achievement (Hrabowski, Maton, & Greif, 1998; Welch & Hodges, 1997). African American males entering one large university acknowledged the value of teachers, summer bridge programs, and the need to serve as a role model for their own children in assisting their transition to higher education (Taylor, Schelske, Hatfield, & Lundell, 2002).

Students also acquire various cultural models as tools for organizing and giving priorities to the social practices in social worlds. Cultural models serve to define people's beliefs and choices based on achieving objects related to success, love, achievement, equality, work, or family relationships (D'Andrade & Strauss, 1992; Holland, Lachicotte, Skinner, & Cain, 2001; Holland & Quinn, 1987). These cultural models are linked to discourses as ways of knowing or thinking. As Gee (2001) notes:

> Cultural models tell people what is typical or normal from the perspective of a particular Discourse... [they] come out of and, in turn, inform the social practices in which people of a Discourse engage. Cultural models are stored in people's minds (by no means always consciously), though they are supplemented and instantiated in the objects, texts, and practices that are part and parcel of the Discourse. (p. 720)

Cultural models may not necessarily serve to fulfill academic outcomes. In a study of college students' cultural models in two Southern universities in the 1980s, Holland and Eisenhart (1990) found that female students acquired elaborate, complex cultural models of romance and dating for establishing and maintaining relationships with males. Over time, students placed greater value on romance and marriage than on their academic work or career goals. Cultural models of individualism—the belief that individuals are assumed to be ideally able to act on their own without dependency on institutional support (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1996)—can work against students' participation in collective activity for coping with conflicts and contradictions. In this model, the individual is perceived as an autonomous actor and thinker who is independent of social contexts and institutional forces. Thus, assuming that one is a complete individual is equated with being independent from constraints or forces, while being an incomplete individual is equated with being dependent on institutions (Jung, 2001). Lack of motivation or desire to enhance one's status is attributed to some internal liability in the individual, as opposed to being limited by institutional, economic, or cultural forces.

This cultural model of individualism is integral to achieving middle class status (Bellah et al., 1996). The ability to act on one's own or being self-disciplined is highly valued in school as a marker of individuality; lack of "self-discipline" is equated with an inability to "control one's self" and one's emotions (Jung, 2001). Interviews with middle-to-upper middle class adolescents indicate that they often negatively judged peers of lower socioeconomic status in terms of these

peers' perceived lack of motivation or failure to conform to expectations for successful performance in school (Gee & Crawford, 1998). In contrast, working class female adolescents focused less on conforming to institutional norms and more on their own immediate interpersonal relationships, as reflected in their narrative accounts of conflicts and tensions in their relationships (Gee & Crawford). In their analysis of California high school students' allegiances to their school versus home worlds, Phelan, Davidson, and Yu (1998) found that students from non-middle class homes often had difficulty aligning themselves within the largely middle class cultures of their schools, leading them to value and display practices that resisted the school's middle class culture.

Given their adherence to a cultural model of individualism, students label themselves and others as "good" or "poor" students based on the assumption that they themselves are responsible for their own success or failure. If they do not succeed in school, they then believe that failure is due to their own inadequacies as opposed to problems with schooling or institutional forces. These negative self-perceptions are further fostered by the labeling of students based on test score results, learning disabilities, or behavior in school, as well as gender, class, or race categories. Such labeling serves to reify certain assumptions about what constitutes "normal" within a school context, so that students who do not conform to these norms are assumed to unsuccessful in school (Alvermann, 2001).

Constructing Identities as Newcomers in a University World

Developmental college students, like all first-year students, attempt to define themselves as "college students" based on their imagined and actual experiences of the academic world when first entering higher education. This activity is especially pronounced when they are externally placed in a separate program or perceive themselves as taking basic courses. In doing so, they are attempting to legitimize their social practices and identities as having some significance related to prior expectations they formulated about college. This suggests the need to examine these students' perspectives of newly acquired social practices involved in their transition from high school to college, along with their levels of engagement with their college worlds (Prior, 1998; Lave & Wenger, 1991; Wenger, 1998).

The notion of "learning trajectories" (Wenger, 1998, p. 153) may be useful in understanding the nature of these students' participation in developmental college programs in which they are reformulating their identities by realigning their memberships and allegiances across different worlds. First-year students sometimes describe themselves as moving on a trajectory over time as they become socialized into various communities of practices associated with their higher education experience, and they move out of other worlds. Wenger (1998) describes this learning trajectory as "not a path that can be foreseen or tracked but a continuous motion" in a community that involves "a field of possible trajectories" [based on] "possible pasts and of possible futures" (p. 154).

Wenger (1998) identifies five different types of trajectories.

> Peripheral trajectories. By choice of by necessity, some trajectories never lead to full participation. Yet they may well provide a kind of access to a community and its practice that becomes significant enough to contribute to one's identity.
>
> Inbound trajectories. Newcomers are joining the community with the prospect of becoming full participants in its practice. Their identities are invested in their future participation, even though their present participation may be peripheral.
>
> Insider trajectories. The formation of an identity does not end with full membership. The evolution of practice continues—new events, new demands, new inventions, and new generations all create occasions for renegotiating one's identity.
>
> Boundary trajectories. Some trajectories find their value in spanning boundaries and linking communities of practice. Sustaining an identity across boundaries is one of the most delicate challenges of this kind of brokering work . . . .

> Outbound trajectories. Some trajectories lead out of a community, as when children grow up. What matters then is how a form a participation enables what comes next.... [through] developing new relationships, finding a different position with respect to a community, and seeing the world and oneself in new ways. (p. 154-155)

These trajectories can be used to describe developmental college students' academic socialization. In a "peripheral" trajectory (Wenger, 1998, p. 154), a new student might not intend to become a full member of a community or may leave the university at some point, but may gain legitimate and meaningful access to some of its practices along the way. As newcomers to the university world, developmental college students are also initially engaged in "legitimate peripheral participation" (Wenger, 1998, p. 11) involving movement from an outside, unfamiliar relationship with a new community to a more fully participating mode of interaction and familiarity with the social practices and values in the new setting (Lave & Wenger, 1991). For example, students may or may not wish to become more engaged or enfranchised members in the new setting (e.g., professors, graduate students), but may have goals of peripheral participation that include getting a four-year degree, gaining some job-related experience, and participating in campus social life.

New students on "inbound" trajectories (Wenger, 1998, p. 154) may become initially more invested in the notion of full "participation" (Wenger, 1998, p. 55) and develop a motivation to explore a more fully fledged stance within the community, yet remain peripheral in their involvement in the present, such as being an undergraduate teaching assistant for a semester. Students on an "insider" trajectory (Wenger, 1998, p. 154) continuously develop within a community of practice and engage in ongoing activities of immersion, with the more fully formed intention of developing an identity of full participation. Some students, and most students at some point in their engagement in a new community, develop a "boundary" trajectory (Wenger, 1998, p. 154) that involves negotiating and balancing demands across multiple communities that may be congruent or incongruent in their relationship to a new community such as higher education. Students on an "outbound" trajectory (Wenger, 1998, p. 155) are disengaging from a community, sometimes to become participants in a new community, such as students who graduate, get a new job, or transfer to another school.

Developmental college students may also use these trajectories as cultural models or scenarios to negotiate boundaries and contradictions associated with conflicting allegiances to university, home, peer group, and workplace worlds. Guerra (1997) describes these strategies in terms of an "intercultural literacy" defined as "the ability to consciously and effectively move back and forth among as well as in and out of the discourse communities they belong to or will belong to" (p. 258). For example, students may develop an outbound trajectory to begin to dissociate themselves from the practices and cultural models of their high school peer group or family. Students also construct trajectories in terms of prototypical or "official" cultural models; for example, there is the model of the "good" or "ideal" student who completes his or her degree program in four years by not working, by taking a complete course load, and by selecting courses relevant to completing a major.

To help students negotiate these trajectories, developmental college programs provide various "paradigmatic trajectories" (Wenger, 1998, p. 156) or socialization models for negotiating trajectories that define what counts in acquiring new practices. As a community of practice, a developmental college program consists of a "field of possible trajectories" (p. 156) constituted by a history or tradition of serving developmental college students, faculty or staff who serve as mentors, and stories or scenarios for successfully acquiring new practices. However, as generalized models, these paradigmatic trajectories may not always address the unique and often private, invisible process of negotiating these boundaries (Wenger, 1998, p. 161). Understanding how developmental college students negotiate boundaries between different worlds in terms of different trajectories provides educators with some understanding of a primary developmental challenge facing these students.

Purpose

This qualitative, descriptive study examined developmental college students' engagement and

experiences within and across high school, university, peer-group, family, and workplace worlds, as well as how they negotiated the boundaries. It also examined students' perceptions of congruencies between these worlds and the negotiation of the borders and barriers between these worlds.

This study addressed the following questions:

1. How do students in a first-year developmental education program describe their personal and educational experiences and transitions?

2. What impact does a developmental program have on their transitions from K-12 to college?

3. Which factors, or "social worlds," are least and most influential in shaping their experiences in college?

4. What are some of their personal and cultural models of "success," "college," and models for being a "good student"?

5. What are the interesting transitional issues and cultural worlds they encounter in college as compared to K-12?

6. How do students negotiate the borders and barriers between these worlds?

7. What are some key moments or critical events in school or other aspects of their lives that impact their transitions into college from K-12?

8. What social practices are students acquiring in these transitions, and how does their developmental education program assist them in acquiring these practices?

Method

Participants

Participants in this study included 14 first-year students from a diverse range of backgrounds enrolled in General College at the University of Minnesota-Twin Cities, which is a large public university located in an urban area in the Midwest. The study group, who are identified by pseudonyms, included: one Vietnamese female (Trinh, age 40); two Caucasian females (Maggie, 18; Anna, 18); three African American females (Brenda, 19; Erika, 18; Kenya, 25); one African American male (Luca, 20); five Caucasian males (Matt, age 19; John, 18; Scott, 19; Paul, 18; Jeremy, 18); one Native American male (Solomon, 22), and one biracial female, Sarah, 25 (African American and Caucasian). They were recruited as volunteers through contact with advisors and instructors who invited students to join the project.

Research Site

The General College (GC) is one of eight freshman-admitting colleges of the University and is one of the oldest developmental education programs in the nation. The mission of GC is to provide access to the University for students from a broad range of socioeconomic, educational, and cultural backgrounds, who evidence an ability to succeed in the University. GC is a multidisciplinary, multicultural learning community that offers a curriculum emphasizing the integration of academic skills development within a variety of credit-bearing academic content courses that fulfill undergraduate requirements, such as biology, art, mathematics, writing, sociology, and psychology. The College also houses student support services such as advising and a variety of in-house student support programs designed to enhance student access within the university environment: Supplemental Instruction (SI) for support in academic courses, Upward Bound for high school students to experience college courses, McNair Scholars for undergraduates to learn about graduate school, the Academic Resource Center for tutoring services, Freshman Orientation, Student Parent Help Center, Transfer and Career Center, Commanding English for English language learners, and Summer Institute for students of color entering college. Students are admitted to GC based on a combination of high school rank, grade point average, and ACT scores as they relate to admissions policies in other university colleges. A number of students are also admitted through an individual case review process. Upon completion of the core GC curriculum, generally after their first three semesters, they may apply for transfer to another university college.

GC as a research site provides a unique opportunity to examine how college students maneuver across these perceived borders in that the college is designed to prepare them with the academic and cultural capital necessary for later success in the

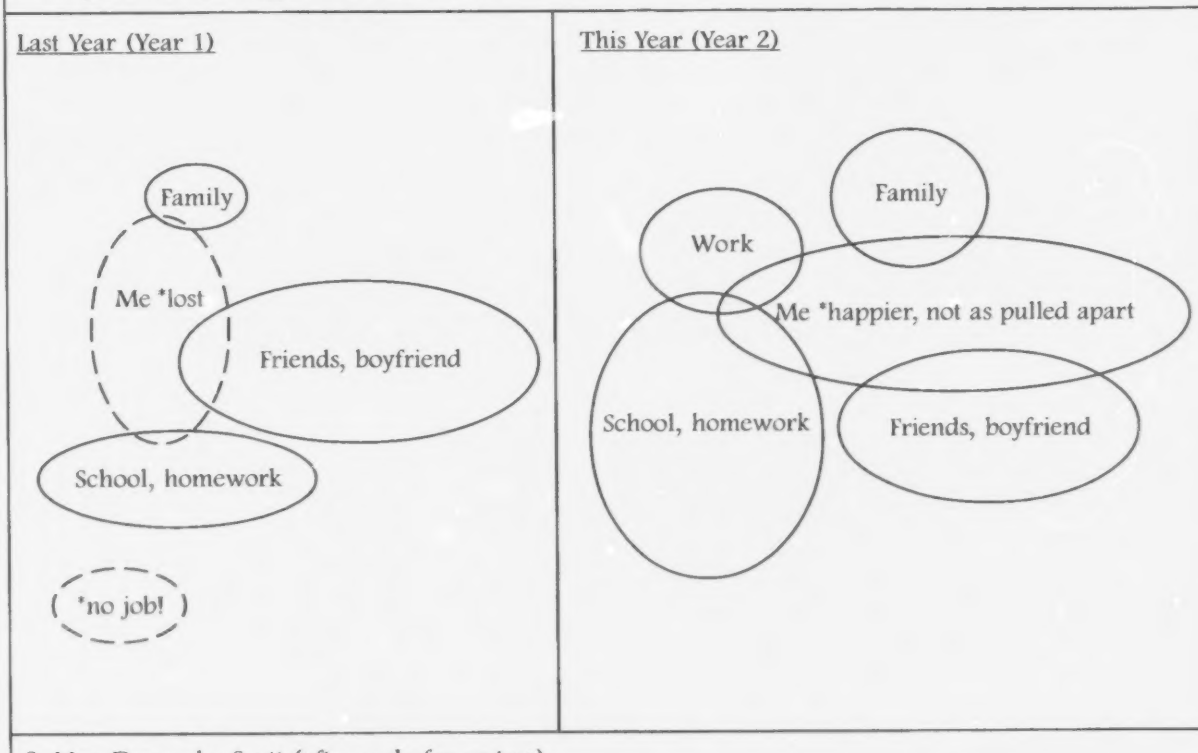
university (i.e., to bridge the incongruent and congruent worlds of students). In contrast to introductory classes within other colleges of the university, classes within GC are small and are focused on providing additional learning assistance with access to instructors and advisors. Most students also take university courses outside of GC, coursework typically involving large lecture formats. Students receive

Figure 1. Sample interview questions.

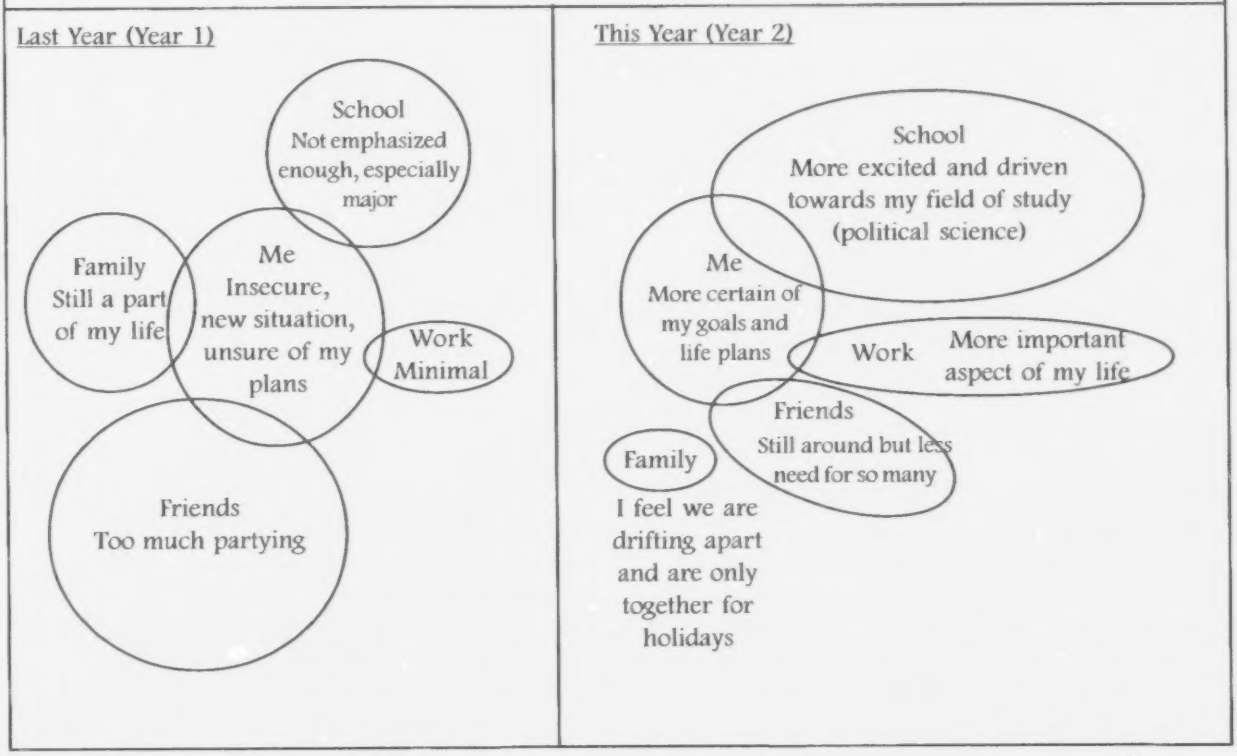
1. How do you feel your high school classes and social activities prepared you for college?
2. What was your high school experience like, and what led you to your decision to go to college?
3. What specific high school courses were important in preparing you for this transition?
4. What role did your peer communities and other extra-curricular activities play in high school?
5. Did most of your high school friends go to college, and were they influential in your decision?
6. In what courses did you excel; what courses were a struggle for you?
7. What was writing like for you in high school; other learning activities?
8. Why did you choose to come to the University of Minnesota?
9. What did do you think "college" is all about (to get a job, to learn, to meet people)?
10. What are your experiences like in GC (courses, peers, support structures)?
11. How do your college courses compare to high school?
12. What about the college "world" is familiar to you; what has felt new or unfamiliar to you?
13. Over the course of your first year (and at various points during the school year—beginning, middle, end), how have your views about college changed?
14. How do your experiences in different college courses compare (i.e., disciplines like math, writing, psychology, etc.)?
15. What are college-level writing assignments like for you, and what other college-level skills have you been required to learn to be successful in the college world—and do you personally view these skills as important in terms of your present and future goals?
16. What are some of the college "worlds" you have noticed on campus, and which have you been affiliated with (such as student organizations, fraternities/sororities, on-campus jobs, etc.)?
17. How do these groups shape your sense of what college is?
18. Which aspects of your transition to GC do you view as successful; what is a struggle?
19. What skills/attitudes do you see as valued/important in the college setting as they relate to being a successful student?
20. Do you see the college world as related to other worlds such as work, family, community, and is this emphasized in your courses or in your daily activities? Does the University value these other areas of your life or connect to them in any way?
21. How much time to you typically spend on campus—do you live on campus or commute, and what is that like?
22. Do you feel like a part of the University; why or why not?
23. What other campus services do you use (learning centers, advising, etc.)?
24. What is your peer community like in college, and how does it compare to K-12?
25. What other parts of your life—like work, family, community—do you feel have an impact on your college experiences and how you view your first year here?
26. Are there any tensions or conflicts or overlaps/similarities between these other settings and communities you are affiliated with?
27. What role did your family play in your decision to go to college?
28. What sort of educational background do your family members have, and are they supportive and understanding of your work in college?
29. Are there any other things about yourself (like your race or social class) that you feel influences your experiences in the University?
30. Have your impressions of "college" changed at all from what you initially expected?

Figure 2. Sample Student "Worlds" Map

1. Map Drawn by Maggie (end of year two)



2. Map Drawn by Scott (after end of year two)



extensive, proactive advising in GC regarding their progress, quality of work, needs, employment, and strategies for transferring to other colleges in the University. Attitude survey data collected from a 1999 random sample of GC students and University first-year students indicated that GC students were as satisfied as other University students and judged their instruction more positively than did other University students, particularly in terms of an emphasis on active learning and student-instructor interaction (Wambach, Hatfield, & Merabella, 2002).

Procedure

Participants were interviewed five times over the course of two years (i.e., three times during year one and two times during year two) about their participation in university, peer group, family, and workplace worlds. The interviews were one hour in length, open-ended, in-depth, conversational, and focused on some general prompts as provided in Figure 1.

They were also asked to describe their goals and purposes for attending college, changes in their college experience, preferences for certain classes, successes and difficulties with college work, involvement with on- and off-campus activities, and perceptions of the relationships between different social worlds. Additionally, at the end of year one and year two, students were asked to draw their worlds visually as spheres, whether overlapping or disconnected, and to refer to this in the interviews to discuss their perceived relationship to each of these worlds and their evolution over time. A sample worlds map is provided in Figure 2.

Students' writing in various college courses was also collected; in the interviews, students were asked to reflect on their writing as it described or demonstrated their negotiation of their worlds. Overall students' transcripts, writing, and world maps were collectively analyzed to create a profile for each case and were also used as points of comparison across cases.

Based on analysis of interview transcripts, the three investigators developed a coding system with 63 codes with a high level of inter-rater agreement. They then employed QSR NUD*IST (1997) for coding of transcripts in terms of descriptions related to the worlds of peers, high school, GC, University, family, workplace and related subcategories; references to congruencies between these worlds; and descriptions of the cultural models (Holland & Eisenhart, 1990; Holland et al., 2001) of mobility at the University, individual responsibility, time management and self-discipline, independence, and transition. Data was analyzed in three related ways: observations about comments within the context of each participant's perspectives focusing on the whole interviews, writing samples, and world map drawings, general thematic descriptions (i.e., comments about the worlds themselves across all students), and intersections of worlds.

Results

Participants in this study varied in their styles and purposes for negotiating these social worlds and practices within the university setting, findings consistent with the high school participants in Phelan, Davidson, and Yu (1998). They also learned to value certain practices over other practices associated with being a certain kind of person (Hicks, 1996); for example, being a "studious person" versus a "party person." In defining and redefining their values during their transitions from high school to college, students positioned themselves in relationships with others and discourses constituting practices privileged in certain social worlds (Gee, 1996). As they encountered different situations or worlds, they discovered that their identities and ways of valuing may or may not transfer across these different worlds (Beach, 2000; Dyson, 1999).

The participants in this study reported both positive and negative feelings about being in GC. This ranged from feeling disappointed about being in a program and building that was separated from other colleges both physically and programmatically, even though they receive full credit and are housed right on the main campus. Given these perceptions and comments they received from their peers and roommates from other programs, students further assumed that GC is considered to be less valued within the University in that it operates in a separate manner and is perceived as less academically challenging than other units in the University. They also noted their University peers employed categories such as "the 13th grade," "pre-college," "school for athletes," or "Ghetto College," categories that imply that GC is not a legitimate unit within the University. Because GC requires a transfer

stage to get into another college of the University, they perceived GC as a transitional "holding space" out of which some may never emerge. The transitional nature of the program was evidenced in descriptions of GC as "like high school," "being in between," "a stepping stone," "like parole," "held back," "a second chance," or "a community college within the University." These notions, some students pointed out, were also evident in external stereotypes about GC, including negative media coverage and their parents' impressions of the college.

This study identified the following kinds of negotiations between different worlds associated with different trajectories (Wenger, 1998, p. 154): congruent worlds with peripheral trajectory, incongruent worlds with peripheral trajectory, congruent worlds with inbound trajectory, incongruent worlds with inbound trajectory, incongruent worlds with boundary trajectory, and incongruent worlds with outbound trajectory.

These different trajectories are offered not as prescriptive, but as describing students' primary orientation during the two-year transition from GC to the University. They also do not account for the fluid nature of these categories over time (i.e., one student may have a peripheral trajectory with congruent worlds to begin with, and then that student may find other new worlds to be less incongruent with college and may be outbound at another point). In some cases, these links were congruent. Students were able to effectively transfer social practices from one world to another (Phelan, Davidson, & Yu, 1998). Although they recognized the differences between their practices and identities across different worlds, they did not perceive these differences as insurmountable. As Erika noted:

> My behaviors, actions, and beliefs are sort of influenced by church. Work dictates what kind of lifestyle I can have. School tells me what I know, and it helps me in how I act. Family tells me rules and what I should be and strive to be. When you look at friends you do kind of crazy stuff and everything, and it helps you in which is kind of cool and not cool . . . . I feel pretty comfortable in all of them [these worlds].

In other cases, the links were incongruent. There were conflicts and tensions between practices and attitudes acquired in different worlds (Phelan, Davidson, & Yu, 1998). For example, some supportive practices and attitudes acquired and valued in the home, such as a respect for authority and set belief systems, were at other times inconsistent with the critical thinking stances valued in GC or University classes.

Congruent Worlds with Peripheral Trajectories

Three students in this study, Brenda (African American female), Paul (Caucasian male), and Maggie (Caucasian female), displayed a sense of strong congruencies among certain aspects of their social worlds that created peripheral trajectories (Wenger, 1998) in their first two years of college.

Brenda. Brenda attended a high school with an education magnet program designed for students who wanted to enter the teaching profession. During that program, she received a lot of support from her teachers to attend college. This program included field trips to the University and information about University programs. She noted that a favorite high school teacher was a primary reason that she decided to attend college. This teacher articulated a paradigmatic trajectory for her based on achieving a long-term professional goal of becoming a teacher and provided her with experiences in which she learned to value practices constituting the identity of being a teacher.

> The teacher that I had in high school, she really brought out what's important to me and what's not, and I took so many classes with her. There's this thing called field experience and we go to different elementary schools and we tutor, and I was involved with that with her . . . . and just the feeling when you know you've taught something to someone that they didn't know and to just to see them say "Oh I can read this!" just to have them come to you and smile.

Brenda received a four-year scholarship designed to support her for four years of undergraduate work prior to her entering a one-year, post-baccalaureate licensure program in elementary education. Her family was highly supportive of her attending college as the first in her family to do so. Brenda was active in her local church community and a Campus Ministry group that provided her with a sense of institutional agency. All of this created a high level of congruency between her high school, family, and university worlds.

At the same time, she experienced difficulty succeeding academically in GC, so that her trajectory was often that of a peripheral outsider. She seldom involved herself beyond classroom participation to construct a more fully involved identity beyond the purpose of graduation. Her primary cultural model was that of "college as responsibility"—learning to become organized and responsible for completing assignments, as opposed to strong academic achievement. Brenda noted that "one of my advisors told me that it doesn't take a smart person to graduate from the University, but it takes an organized one." She noted that "to survive in college," she "learned to pace myself, to study every morning, go through and review your work every morning."

During her first quarter at the University, she struggled with her academic work. She attributed her difficulty to her lack of experience with college work during high school, particularly with writing that required original thinking. "I have written papers in high school, but it was like you copy out from whatever the book says and you put it in your paper . . . . There weren't any classes that I can truly say that got me prepared for college." She also attributed her academic difficulty in both high school and college to her association with peer groups that had little interest in studying: "I knew I should have been studying, but I wanted to go to the mall, so I was like okay, I'll go." Given lack of resources, she also worked as an assistant manager in a movie theater from six to one in the morning, time that conflicted with her schoolwork.

Despite her academic difficulties, she maintained a strong interest in staying in college to achieve her long-time goal of becoming a teacher. During her second year, she enrolled in a psychology course on children's behavioral problems. In that course, she was able to perceive a link between her academic work and her experiences in working with children during a summer tutoring program. She also discovered a new peer group in GC that was supportive of her work. In contrast to her previous peer groups who distracted her from academic work, resulting in a poor high school academic record, these college peers would engage in study sessions, meeting Brenda's needs for both social interaction and assistance with her work.

Although Brenda described an occasional tension with her boyfriend, who was not in college, she maintained a sense of connection to the congruent aspects of her life that supported her academic goals. She also noted ways in which GC provided her with good support programs (e.g., courses, advisors, and learning centers) that enabled her to succeed, yet her trajectory remained primarily peripheral in that she defined her goals in terms of practical, vocational terms.

Paul. Paul grew up in and commuted from a small town of 2,000 people, in a family that supported his desire to attend college. His father attended the University and had expectations for his son to also attend the University. In high school, he did not do well, with a 2.5 overall GPA. He recalled spending more time in high school with his peers and participating in sports than with his coursework. "I just coasted along through school and never gave it much effort, never doing my homework assignments on time." He was reluctant to begin his University career in GC, but he had little choice given his low GPA. As he put it, "GC chose me. I didn't choose it."

When Paul began his studies in GC, he struggled with his work, often due to his procrastination in completing his papers, waiting until the deadline. "I literally have to lock myself in the room, and just say there I go, I'm going to do it right now . . . . I really have to start doing things earlier. But it is harder to do." However, he discovered a new group of peers who were more focused on studying and being active participants in class. "When I have friends in the class, I can go with them, go to class, and do some things afterwards. It gets me to class more often too."

Like Brenda, Paul's primary cultural model of college emphasized the need for organization and individual responsibility associated with achieving one's goal. He drew on boxing metaphors in subscribing to his belief that "life is all about getting up and going that extra round . . . . When someone knocks you down you gotta get back and go." In each case, the notion of taking responsibility of some kind was a point of negotiation. Despite an improvement in his grades, he remained in a peripheral trajectory because he perceived his GC coursework in utilitarian terms as "a stepping stone . . . . a rung on a ladder" towards transfer into a business major. He preferred coursework in which teachers "tell me what I need to learn and how to learn it," presupposing a transmission model of learning as acquiring information. For Paul, "school tells me what I know." He avoided interacting with

instructors because "I don't want to waste their time or use up their time when they have stuff to do."

Paul's conception of learning as acquiring set knowledge was evident in his resistance to exploring diverse opinions in the classroom. He noted one instance in which he openly criticized a female student for persisting in discussing politics. "If she talked about politics, I'd shoot her down . . . . You don't talk about politics . . . . She broke the norm, so I had to sanction her back in her place." His resistance to "relativist" intellectual reasoning (Perry, 1981) was evident in his notion that "everyone has an opinion, and everyone will keep their opinion to themselves. It's not polite to try to change your opinion. Pushing opinions on another annoys me." His preference for absolutist, "dualist" (Perry, 1981) modes of knowing is consistent with Paul's larger conception of learning as acquiring knowledge, a stance that precluded him from wanting to engage in intellectual exploration.

Paul maintained distinct boundaries between his different worlds. His map depicted separate circles for school, family, work, and peer group. He described his relationship to these separate worlds as a "space ship . . . . jumping around from one world to another." Although his family, peer-group, and workplace worlds provided support for and were congruent with his school world, Paul maintained boundaries between these worlds in ways that kept him in a peripheral trajectory.

Maggie. Maggie, a student from an upper-middle class, predominately White, suburban community, initially expressed her strong resentment about being placed in GC. Her socioeconomic background and high school experience, as well as significant family support, created a strong sense of congruency between these worlds. She believed that attending college was a necessity; not graduating from college was undesirable for her in terms of achieving a career goal. She noted, "I see a lot of people out in the work force that can't get good jobs because they don't have a degree."

At the same time, her cultural models of independence associated with a world of White privilege kept her on a peripheral trajectory as an outsider who did not believe that she belonged in a program she perceived was "easy." She believed that she was being "held back" and felt she was "on parole" in the College until she could transfer. She also expressed resentment at being treated like a "younger child" in GC.

> What am I? Still in high school? Why am I still in these little classes? Why didn't they think I was prepared enough for college, which obviously I graduated. I applied to college, but I wasn't great, good enough to get into college . . . . [I'm in] baby school. I needed to be thrown into college just like most other colleges do. This is how it is, and this is what to expect.

She perceived her GC classes as much more structured than her University classes outside of GC, structure she equated with being in high school. "Here is everything you are going to need to have and everything that will be assigned, and don't forget we have an assignment due tomorrow." Given her cultural model of autonomy, she perceived this presumed need for dependency as conflicting with her need for independence as a college student to prove herself without receiving such instructional assistance, something she equated with the "real" University outside of GC. She equated the "real" University with large lecture classes, and, as did Paul, a preference for a transmission mode of learning, which she associated with independence as opposed to dependency.

> I really just want to move and get on with real school instead of classes of 20. And let's talk about economics. I want to be in the big lecture, you know, this is how economics is and I'm going to tell you about it. Don't ask questions, take notes, and then deal with that more on an independent learning kind of thing instead of having to turn in an assignment every other day.

Despite the fact that approximately two-thirds of the students in GC are Caucasian and one-third are students of color, as a Caucasian student, she believed that she did not "belong" in a program that she assumed was designed primarily for students of color. She also admitted that "society helped me look negatively at [GC]," a reflection of how she internalized social stigma and stereotypes. Maggie's perspective was upheld, though articulated less overtly, by other students from privileged social and economic

backgrounds (primarily White and suburban), who also articulated a strong sense of wanting to define themselves as separate from the college's perceived central function.

However, as she progressed through the program, she changed her attitude about the value of the additional assistance she was receiving, noting that she was "slightly more privileged" than her peers in other programs to be getting extra help compared to the lack of assistance she experienced in classes outside of GC. This perception reflects an individualistic cultural model of college in which students must learn to fend for themselves. This perception created a contradictory position for some students as they described many of their GC courses in positive terms, while simultaneously comparing them, sometimes more negatively, to their perceptions of the University where they would be continuing their course work and degree programs after GC.

As she progressed through the program, she became more convinced of the need to formulate her own values in terms of being independent of others. "If you don't know what your values are, then you really have to sit down and think about who you are and how you've been brought up . . . . I realized that there's more to life than friends and family and parties." She experienced tensions between her roommate's interest in a sorority and social life while her own focused more on studying. In reflecting on these tensions, she began to define her own values as distinct from those of her peers. "So people are just different and she [her roommate] cares more about what people think of her than how she feels about herself."

By the end of her second year, she noted that she attended more to her studies than in her first year, but did not like it as much.

> I hate going to school, I mean I don't hate it but I really don't like it, but its something I have to do. I have to get a college education... because I see a lot of people out in the work force that can't get good jobs because they don't have a degree.

She also noted that "learning is hard for me, reading questions on a test over and over and over and I still don't comprehend it, so school has been really tough." At the same time, she believes that had she been admitted to the "real" University and "thrown into college just like more other colleges do," that she might have been more academically successful, a stance that reified her peripheral trajectory. Thus, the congruency between her socio-economic background and the University ironically kept her in a peripheral trajectory.

Incongruent Worlds with Peripheral Trajectories

Two students, Trinh (Vietnamese female) and Anna (Caucasian female) negotiated incongruent worlds and held peripheral trajectories in GC.

Trinh. Trinh, a recent 40-year-old immigrant from Vietnam, whose spouse was a graduate student at the University, described her experiences with language differences in college. She indicated that her English proficiency test score was low, and that the test was very difficult. Her previous world of Vietnam was so different culturally from that of the University that she recognized the need to be in GC for their second-language support program. "But I prefer it here [GC] because I want to adapt to the University environment." In GC, she developed her English skills in the Commanding English program, and was required to take a writing course sequence in which she received supportive instruction and assistance with language and academic content. She noted there were fewer direct lines of support in regular University classes for students learning English who needed language learning instructional support. She also received helpful assistance from her advisor.

> With GC, the one thing that is different with another college is that GC makes use of students' advisors often. We have one advisor and in another college, when you want to see an advisor you have to meet with different advisors all the time. In GC one student has one advisor for a year. My advisor knows me and my situation, my problems, they know everything.

Given the outdatedness of her previous credits for academic work in math courses in Vietnam, she was having to retake math classes in GC. Trinh also experienced cultural differences between her writing style for course papers and her previous writing in

Vietnam. She contrasted her previous writing experience with the essay style of the university in which one is expected to formulate the main point in the beginning of a paper.

> If we write something in Vietnamese style you need to talk around and around and now finally, maybe one page or half page, at least about the main purpose. But in American writing style, two sentence or four sentence, you talk about directly something you want to talk about. And after that, you explain why you want to talk. In Vietnamese style if you write like that means you are very low level and not educated. You need to talk around, something else and something else.

During her first year and second year, Trinh worked in a job at a local grocery store, which offered her an opportunity to practice her English language skills. During her second year, she also worked in the financial aid office reviewing scholarship checks. Though she also admitted her grocery store job was "not really fun," she noted,

> But I learn a lot at [grocery store]. I think that is the true school at the store because of the different character and the different attitude. They get mad at me when something is wrong, but how I deal with them, that is why I think that this is a real school for me to learn.

Given her age, and the fact that she had a young child, Trinh found it difficult to develop relationships with college peers. She noted that she was still expected to be both "housekeeper and student," which created time conflicts with her studies. These time conflicts, as well as the lack of congruency between her Vietnamese and school cultures, meant that she remained in a peripheral trajectory. However, as she acquired more cultural knowledge, she anticipated establishing a close link with college. "Before I don't understand American ideas and culture, and now I know I need to adjust to it because we need to count with them, and we are living in this society."

Anna. Anna was a first-generation, commuter college student with a strong cultural model of independence and individual responsibility. Her family could not assist her financially or emotionally with school. Given her need for independence, she eventually moved out of her parents' home, while simultaneously trying to manage the incongruencies of coping with living in a household where her primary goal of getting a degree was frequently met with misunderstanding and discouragement.

In high school, Anna rarely employed practices such as posing questions that might later help her succeed in college. "If I had a question for a teacher, I would never ask. Or if I was in a class where I didn't know somebody, I wouldn't ask any questions."

She did not identify with the College's goals and structure. She believed that her admission to GC was a mistake. As she noted, "I don't think that I belonged in GC," which she perceived to be more like high school than the University. As was the case for Maggie, she believed that her autonomy both from her family and the classroom was part of her larger goal of becoming part of the "real" University, referring to the larger, lecture-style university courses. She preferred the anonymity of lecture classes. "I don't have to worry about the teacher calling on me . . . . if I want to say something I can volunteer."

Anna also distanced herself from her high school peer group, most of whom were not in school. "Everybody goes out, and I can't go because I need to study." She described her friends who have children and how it differed from her life as a student, which required her to study much of the time. "They are home all day. They will call and ask what I'm doing. They ask to come over, and they want to come over with the kids."

She therefore not only experienced little congruency between her worlds, but she also deliberately adopted a peripheral trajectory in GC. "I thought that I would be working more independently on things and not having, it just seems that they hold your hand a lot still, and they still are pushing you like in high school. Like I pictured in college, doing independent work all the time." That defined her trajectory in terms of a cultural model of transition that reflected a tension between stasis and transition, between being in the same enclosed, single GC building and moving into the University. Anna used the metaphor of GC as an "entrance ramp" that allowed her to find her way into the University. In this description, she referred to a unique feature of the highways in the Twin Cities called "ramp meters,"

traffic lights that signal cars and indicate when they should enter the freeway during rush hour times to regulate traffic flow.

> It's kind of like, when you are on the entrance ramp to a freeway. You move pretty slow up to the meter, then you get your green light and you are off at your ultimate speed. That's kind of the way I look at it. I came to the GC and I knew I was going to be accepted here even though I applied to CLA [College of Liberal Arts]. I was disappointed, but now that I look back at it, I'm glad I started out here. I started out slow just because if I had started out in CLA, I wouldn't have done as well as I did here, I know that. It gave me a chance to be introduced a little bit, kind of the intermediate pace in between high school and college . . . . I think GC is up to the [ramp] meter.

Anna also perceived her trajectory in terms of developing a more assertive identity.

> I'm learning to be less shy. To be more assertive I guess, aggressive, which is good . . . . because eventually I am going to have to go out in the real world, and I am going to have to be aggressive if I want to get a good job.

At the same time, during her second year, Anna continued to struggle with balancing two separate jobs and her coursework associated with a pre-nursing major. She later perceived herself as being in the middle lane of the freeway because "I don't think I have the whole college thing down yet. I still have to apply to the nursing school. I could change my study habits. There are some things I could still learn about college."

Congruent Worlds with Inbound Trajectories

Matt (Caucasian male) and Jeremy (Caucasian male) experienced high congruencies among their different worlds and reported inbound trajectories in their college transitions.

Matt. In his high school senior year, Matt recognized that he was shortchanging himself in not working in his classes and in conforming to others' perceptions of him as a "dumb athlete." He perceived his peers as:

> kids who could go to church, play a sport, do well and get D's, and be stupid . . . . I just knew for a fact that I wasn't dumb because everyone always told me I was smart. So I quit the sports and that was it. I didn't want to be that kind of person . . . . Then I came to college and I got straight As.

Building on a congruent family support system and a solid high school preparation, he further disassociated himself from a high school friend whom he described as "still trapped in a world that I can't deal with anymore." Matt became increasingly interested in academic matters associated with defining an inbound trajectory. He was initially critical of dependency associated with having to be provided with information in classes, something he did not associate with being in college. "They were treating us like we needed all this help. I'm the kind of person who will never take it even though I need it." He disliked practices such as uses of name tags, group activities, or taking attendance because he equated these with the lack of independence he associated with adulthood.

In his second year interviews, Matt adopted a different attitude towards GC, noting that he benefited from the advising help he received in GC and his opportunity later to serve as an undergraduate teaching assistant (UGTA) in a writing course. Serving as a UGTA provided Matt with a sense of "deep participation" (Prior, 1998, pp. 102-103) with faculty. He gained a sense of agency through assisting other students with their writing and, as a second-year student, providing them with information about College programs and activities. Matt noted, "It is the process of doing something that you can be proud of. You have people going, oh gosh, you did this." Assuming the UGTA role afforded him a sense of responsibility consistent with his cultural model of adult independence. It also served to align him officially with the College's mission, enhancing his sense of being on an inbound trajectory.

Jeremy. Despite his low high school class rank in a private parochial high school, Jeremy was admitted to GC due to his high test scores. "The reason for that was I had a cumulative GPA of 1.5, but my ACT and SAT scores were exceptional, in the upper 90th percentile, so I did make it into GC without a problem." He attributed his low high school GPA to his struggle with various diagnosed learning disabilities. In college he

was able to obtain appropriate accommodations and campus disability services so that he received appropriate disability-related accommodations in his courses, services that he described as essential in helping him navigate his course work.

One primary challenge was his tendency to organize his writing around oral discourse conventions of conversational turn-taking as opposed to an analytic, "essayist" framework (Farr, 1993). He noted that "when I'm talking to the person, I don't have a difficult time. Writing for me is a completely different language." He also had difficulty with writing on his own because he was not receiving immediate, verbal feedback. "I just love doing the research, but sitting down and writing the paper is just impossible for me. I hate it, hate, hate it. I literally have to lock myself in the room and just say here I go, I'm going to do it right now." Given his writing difficulties, he consistently received low grades in his courses.

Jeremy benefited from opportunities to interact with instructors and peers about academic matters, something he appreciated about the small GC classes as opposed to large lecture courses outside of GC. Because he read widely, he engaged in high-level conversations with instructors, who appreciated his intellectual interests and background reading, experiences that served to create an inbound trajectory consistent with participation in academic work. He therefore actively sought out opportunities for deep participation (Prior, 1998) with instructors, and he was critical of learning involving recall of information in introductory philosophy courses.

> In the lower division courses what they do is make you memorize dates, places, and names of philosophers and what the philosophers did. You're not doing any thinking of your own. It's not philosophy. In the upper division courses, you actually get to do some free thinking and some debate.

In his second year, Jeremy obtained a technology support staff position in a University department, something that served, as was the case with Matt, to further cement his connection to the University in an inbound trajectory. He also became an active member of a student group that he described as "a free thought alliance, it's mostly free thinkers, secular humanists, atheists. It's the most fun I have had with a group of people." However, he continued to struggle with his courses, particularly those that required him to formulate thoughts in a logical, coherent manner.

Incongruent Worlds with Inbound Trajectories

Scott (Caucasian male), Erika (African-American female), and John (Caucasian male) entered college with some conflicts between some worlds, especially family, peers, and high school, but all eventually gained a more inbound trajectory as they continued in their college transition.

Scott. Scott attended high school in a small, rural town and initially wanted to attend a local state University in his area. He worked in his family's hardware store, to which his family hoped he would eventually return upon completion of a business major in college. He noted that his family's lack of interest in and understanding of academic work created a high level of incongruency between his college world and his family world. He also recalled little from his high school that prepared him for college other than one high school English class that was geared for college-bound students. "It was my first real taste of what college work was going to be like."

During his first year in GC, Scott began to develop an interest in social studies and in becoming a social studies teacher. Having his career goals tied to academic work served to define an inbound trajectory for him.

> It's not that I'm so determined to become a teacher; it's more like confirmed because if I'm not going to become a teacher then I have no place being here. I like my life here so now I'm going to be a teacher. I don't mind spending a week in the library reading about transitional Russia or problems with banking for the poor."

He also began to "think more critically about everything in my life," particularly in terms of "being independent of my parents" and their utilitarian beliefs about education. To manage this, Scott tried to find a job on campus during his second summer instead of going home again to work with his family, creating more misunderstanding but aligning more closely with his newly formed values. No longer being dependent on his parents' support by working more hours to pay for his education and living made Scott "more grown

up. I have to get my stuff together, and I have to do this because this is what I want to do for the rest of my life." He contrasted his own experience of the value of intellectual work with the workplace experiences of his former high school friends.

> They don't seem to use their brains as much once you enter the working world. Things become the same old mundane thing day after day and your brain is not as sharp. You just accept things for the way things are.

Thus, Scott experienced a profound shift in values associated with moving away from his hometown culture into an academic world associated with his future goal of becoming a social studies teacher.

Erika. Erika lived with her single-parent mother and needed to garner her own financial support in order to attend college. She had clearly defined goals in terms of achieving success, noting that, as the youngest member of her family, her older brothers and sisters "liked to party or get into trouble. I don't want to be a part of that." She was a graduate of a college preparatory high school program in which she was an average student. She recalled that her high school was so structured that she did not develop an ability to make her own decisions. "There was always someone telling you, gotta do this, do it! do it! So the level of responsibility wasn't there [for themselves]. In GC, you have to be responsible for that because no one's gonna tell you."

She originally wanted to attend Howard University in order to "go to another place and see how successful I will be without all the distractions of my friends and family." However, once she was in GC, she noted that she was provided with a number of benefits that helped her eventually transfer into the College of Liberal Arts. She described how her advisor helped her with other things beyond the immediate GC course and transfer requirements, a supportive relationship that helped her merge related worlds both in and outside of college and build her personal skills for both school and employment.

> She was just really friendly so I just started coming to see her like in the first quarter of classes. I know I came to see her at least two or three times a week, maybe more. I just wasn't sure of which direction I should take. Since then, she has helped me get my job [in another GC support program, Upward Bound]. She has helped me plan my classes and the classes that I would like, and I have done well in most of them. She's helped me to become a better speaker and how to work with people more. Right now I gave her another project to help me look for a summer job.

She noted the benefits of study skills coursework that:

> helped me learn what I should be getting from the lecture classes. That has helped me a whole lot in comparison to the other kids in the class that don't have the SI [Supplemental Instruction] class. We've done much better. Now I know how to study. I'm focused more in class. They point out for you what you should be looking for.

From this coursework, she also learned the value of "time management [as] the key . . . . besides going to work and being in class, I need to learn how to focus."

Based on her successful work in her job and making the Dean's list, she acquired recommendations that led to a scholarship award for her second year. She also noted the value of providing financial aid to low-income, African American females like herself. "How would you guarantee that someone like me who is not from a rich background, a minority woman, would get an opportunity even to get the same advantages of some White people, some more privileged people?

By the end of her second year, she had transferred into the College of Liberal Arts and was focused on achieving a high enough GPA so that she would be admitted to the journalism school and could earn an internship in a program for students of color interested in a business career. She had also become active in a University public relations organization for African American studies. Serving in these various extracurricular organizations provided her with a sense of agency associated with her ability to work with others and to define her identity in terms of an inbound trajectory despite the incongruencies between her family and college worlds.

John. Similar to Jeremy, John struggled in high school due a learning disability that remained undiagnosed, which continued to create difficulties for him in college. Unlike Jeremy, he did not have the financial support and resources to obtain a definitive diagnosis, particularly because his disability is associated with learning math. He was critical of the failure of his high school remedial math courses to assist him with what he perceived to be an underlying math disability. In recalling his experiences, he wrote in a college class assignment about his hatred of his teachers' condescending, demeaning treatment.

> Hating the person who tries to teach you simply does not work. Often times I would leave a class in a worse mood than when I entered it. Everyday it was the same thing. It would start with the look. The kind you'd give a child. Then, it was that tone of voice. Again, the kind that you'd give a child or maybe a puppy. That demeaning, condescending high pitch that grates on the nerves and boils the blood.
>
> Then, there's how they talk. Because I have a disability in one area, they think it extends to every other area in my life, including the ability to understand speech. They talk slower than they ordinarily would. They use smaller words. They make the conversation nearly unbearable.

John's description of his high school experience captured the different voices of his teachers as representative of a larger discourse of power. He then used his writing to begin to formulate his case for a request to waive his math and science course requirements from the University, something, he noted, that had never been done at the University.

Initially, John's self-esteem as a college student was quite low; he labeled himself as a "loser," "slacker," and "lazy" to define his relationship to the academic requirements of college. He also found himself increasingly detached from his high school peer relationships. He described one of his friends as "out there working some crummy job now. And the guy has no direction, no sense of where to go. I feel bad for him." He also noted that his peers perceived him as adopting a new identity in that he "used some vocabulary that they weren't familiar with. They called me 'college boy.'"

While all of this resulted in a lack of congruency between his high school and peer worlds and his college worlds, John began to develop a strong interest in writing based on success in his GC writing courses. This led to publishing a review in the student newspaper, and he experimented with producing an artistic magazine with one of his college peers, experiences that served to define an inbound trajectory consistent with a future major in creative writing. A key factor in his success was the support of a GC writing teacher who expressed an interest in his struggles with disabilities that he wrote about in papers, and in his work in other classes. "He still says 'hi' and talks to me and things. He is curious how that thing [another hard class] is going." Eventually, John was formally diagnosed with a learning disability in math, but he continued to struggle with the bureaucracy of the University in navigating his course load and the math requirements.

Congruent Worlds with Boundary Trajectories

Luca (African American male) experienced congruent worlds, but constructed defined boundaries between those worlds, adopting a boundary trajectory.

Luca. Luca was a student parent with clearly defined career goals. He valued the preparation he received from a demanding, highly academic high school program, particularly in terms of a focus on writing, a strength he continued to pursue successfully in college. He liked the supportive nature of the GC program in addition to the greater racial diversity among students in the college. "I guess this is the most diverse of all colleges [in the University], so I thought it would be a good place to start." He also valued the fact that college provided him with "outlets for you to express yourself. It's all determined by what you want to do because you don't have to do any of them." He preferred the small classes because "the teacher is right there, and it wouldn't be taking up that much time to get a question answered" and the fact that "students have to speak up more than in [the university courses]." He also liked the fact that "there are more people around that look like you, act like you, and that you are used to." Luca also responded positively to the multicultural curriculum in the courses. He described the teaching methods in one course. "We would take things from different angles. Like we would take

something from a White American's values, from Latino's values, and then would understand everyone's position."

Although Luca experienced a sense of congruency between his diverse community culture and the diversity of GC, he noted distinct differences between his neighborhood community diversity and larger University culture, which led him to adopt a boundary trajectory. In his non-GC courses, he described a strong feeling of isolation as an African American male. In these courses, he often spoke out, which he knew made some of the other students "uncomfortable." He used the term "boundaries" to define himself as he stated how he chose to negotiate his personal time commitments on and off campus, especially with his job outside of school, where he also was one of only a few men of color. He criticized having to conform to what he perceived as external dictates on appropriate social practices and the need for code switching. In these contexts, he had a strong sense of the need to have to "prove yourself" given certain stereotypical assumptions about the abilities of African American males. Luca believed that his "teachers assume you know less because you are Black. They assume . . . . that you need closer attention because you're Black."

Luca did not socialize with students in non-GC classes, a practice consistent with his need to maintain separate boundaries between his different worlds. He noted,

> It's hard to be yourself sometimes because being yourself isn't acceptable. In the way you dress, in the ways that you use language. The way I speak in front of my friends is totally different from the way I speak at work or in class.

He also compartmentalized his school and his work, as well as his family life with his girlfriend and his daughter. His "boundary" work became the subject of poetry writing about the alienating effects of racism on the deterioration of his predominantly African American neighborhood. He based his poetry writing on his belief that:

> It's strange when people of color move into neighborhoods how property value depreciates . . . . people don't want to live around people of color. It's in a large sense, everybody wants to live in their own separate community. People are used to living around people that look like each other. I guess it's uncomfortable.

In his second year interviews, he noted the value of "branching out"—"meeting new people . . . . that do things I like." He served on the board of an African American campus organization, as well as the student board. Despite his sense of a strong boundary trajectory though this transition, he also stated that his work with student organizations became a way to better navigate these boundaries toward a more constructive end—changing things in the University. He hoped to develop an on-campus organization designed to foster exchange of ideas in order "to understand that other people have other ideas" so that they may challenge "what they are taught to believe."

Incongruent Worlds with Boundary Trajectories

Solomon (Native American male) experienced highly incongruent worlds, leading to a boundary trajectory.

Solomon. Solomon arrived in GC after a period of intense military service in which "I felt like I was in jail, and I was just about to be paroled. I was just over there [in Kuwait] for so long." He perceived his military and his college experience to be incongruent worlds. His life in the military was highly structured, but in college, "I made all the decisions. I decided what classes, what I wanted to take." He also perceived himself as under less stress than in the military, allowing him to "let my hair down, so to speak, and relax." At times he expressed a feeling of internal struggle with his new life on campus and the options it offered in contrast to his highly structured military life. Although he wanted to leave the military to have a college experience, the contrast between the two settings was difficult to negotiate.

Solomon believed that it was his responsibility to negotiate these differences, reflecting adherence to a cultural model of personal accountability. "Students have to own up to their responsibilities, especially considering they are paying for it and they're benefiting from it . . . . it's up to you to go through the

book, go through the material, read it, prepare yourself ask the TAs." He was proud of the fact that he financed his own schooling through scholarships, which also made him feel independent. One difficulty, however, was that in the military he had become "dependent on a 'supporting cast'" that was highly structured to help him cope with personal challenges. He was reluctant, in contrast to some of the other participants, to seek out support from the less structured on-campus resources or from peers. As a slightly older student at age 23, Solomon was "very isolated . . . . I'm somewhat behind the people of my age as far as a career and job." He contrasted his very "tight" peer relationships in the military "with a small group of people" to his more amorphous relationships with college peers. When asked to propose changes, he suggested developing small support groups of students who would be taking the same classes and who would assist each other in those classes. "You could help someone study and they could help you study . . . . you could really push each other in that support system." At the end of this research study, rather than transferring into a University college, Solomon was considering transferring to a smaller college because "I need a little supporting cast, and I think if I maybe went to a smaller school I would get that."

Incongruent Worlds with Outbound Trajectories

Kenya (African American female) and Sarah (biracial, African American and Caucasian female) were two students with known outbound trajectories marking their leave from the university during this study. Both students experienced incongruent worlds that led to their departure from GC.

Kenya. Kenya, a single mother of two, had held a number of jobs, including a community organizer job, prior to beginning GC. She became pregnant during high school, but graduated on time. After she had a second child, she had more difficulty juggling the demands of home and school work. Kenya also had financial difficulties and sought to improve her vocational status. In addition, she also experienced tension between the beliefs she acquired in her church and the learning processes in some of her courses.

> Taking classes from my spiritual community really helps me think deeper, pull things apart, take another approach on the limits that we have in this society to think . . . . Taking classes through my community really helped me use my innate wisdom and really just not accept what everything looked like.

This focus on beliefs conflicted with "memorizing things [as] 'knowing things' instead of listening yourself." On the other hand, in some of her GC classes, she was able to draw on her strong community-based beliefs to engage in critique, for example, of advertisements geared for African Americans.

Kenya did perceive the tutoring (i.e., in writing and math), career planning, and student parent services available in GC as assisting her in negotiating the conflicts between her home and school worlds.

> It's like today I wanted to do my work, so I got in early, but I wasn't really feeling like I could be on track, so I stayed in the Student Parent Help Center, and I opened my book and started working and other people came in and they started opening their books, so even though there was conversation going we were still working. And that was good, and it's like okay there's a work team going on in here, so we better get to work.

Kenya also indicated that participation in an internship program, which included weekly speakers and discussions, helped her address some of her concerns and questions related to diversity, education, and career options. She noted, "That's what kept me here . . . . just really looking at what makes us different and not just tolerating it, but appreciating it and getting right on the level of a person who might be diverse compared to yourself."

However, at the end of her first year, the state welfare program and educational program options that supported Kenya were discontinued, resulting in a loss of future funding. Without financial support, and facing another pregnancy and health concerns, she decided to withdraw from the program for the time being with stated desires to return to college at another time.

Sarah. Sarah returned to college at age 25 after an accounting career in the business world. She was motivated to obtain a college degree by the fact that

she was paid "about $25,000 less than they would pay someone who had a CPA [Certified Public Accountant] [in her position]. I just have to finish up my education . . . . and then have the ability to get paid as I should." Like Kenya, as a student parent, she needed to support her son while finding time to go to class and make money for school, creating a constant feeling of stress and incongruity. Sarah noted a disparity between her experience in her previous job, in which she had to complete projects quickly, and having to spend long periods of time on academic projects. As someone who was older than most of her peers on campus, and as a commuter student, she also experienced few meaningful peer interactions on campus because she was not comfortable interacting with younger students in her classes, even though the age gap was not significant. She said, "I wish I was just with my own peer group." She also perceived some of her coursework as too "remedial" in its format.

> Yeah, without learning, you can ace it. But yeah, like I was saying before, I'm at the point in my education where I don't want to float by anymore. I've done that. I'm here to soak some things in, you know? To have some discussions and understand it . . . . This course really reminds me of high school because you read it, and you're supposed to memorize it. You know, memory. It doesn't seem right. I mean I know you need to memorize certain words to understand the vocabulary and be able to discuss it, but I thought you know at this level it's an exchange of ideas . . . . I don't think this would fly in any other higher level.

Despite these challenges, Sarah found many of the GC instructors to be supportive of her and her work, particularly in contrast to classes outside of GC. "The classes were a little bit smaller and the teachers seemed more caring toward the students than the guys who just sit in front of the lecture hall all day long."

However, she struggled in her courses, often due to time conflicts with family and work demands. Although she recognized the value of her studies in achieving her definite career goals, Sarah faced a difficult decision during her second year on campus when her grades were not adequate to transfer into her desired major. With the input of her advisor, she then decided to transfer to another college in the area with a similar program with the acceptance that she could not meet her goals in the University and that perhaps another program could provide her with an alternative means and environment to achieve them. Thus, her outbound trajectory from GC was really a feature of her peripheral engagement with the university and simultaneous identification of a potential opportunity elsewhere.

Summary

During their first two years of college, these 14 developmental college students negotiated congruencies between various social worlds and exhibited a range of learning trajectories as they engaged in activities in the University. Over time, they shifted their practices, priorities, and trajectories as they negotiated congruent and incongruent relationships between GC and their peer, family, workplace, community, University, and former high school worlds. These trajectories and negotiations were mediated by a variety of cultural models constituting valued practices, including models of independence, responsibility, autonomy, mobility, time management, self-discipline, and transition to adulthood. At the same time, participants' trajectories and ability to negotiate worlds varied considerably due to prior histories, cultural backgrounds, expectations, and past experiences with social and academic activities.

The majority of the participants in this research perceived GC as providing them with support that helped them succeed in college. Consistent with the previously-cited attitude survey data (Wambach, Hatfield, & Merabella, 2002) and recent national studies (e.g., Light, 2001), they noted the value of small classes, individual attention, and ongoing advising that helped them develop confidence in their ability to succeed at the college level. They also contrasted this supportive environment with the more impersonal large courses outside of GC. Although they sometimes did not initially appreciate the value of this support, in their later interviews many students recognized that they needed additional help and advising services in order to succeed in the University. Based on this experience in a supportive context, they began to challenge some of their prior cultural models of college, leading them to construct different, alternative identities as college students.

At the same time, some participants were highly critical and suspicious of classes and methods that are perceived as "remedial." They consistently cited the example of one course that they perceived was taught in a manner that involved low-level acquisition of concepts and facts and did not challenge them intellectually. They assumed that college would challenge them intellectually instead of reinforcing a "dumbed-down" experience that they believed was inferior to their preconceived expectations about the academic world.

In stating their opposition to courses they did not perceive as challenging, students also began to recognize their own deeper, intrinsic motivation for learning as opposed to being motivated simply to obtain grades. In some cases, they recognized that getting good grades did not necessarily mean that they were learning. Students placed a higher value on courses that asked them to take direct responsibility for their learning and that stimulated them to think critically and creatively.

Participants also discovered that success in all of their college courses depended heavily on the quality of their writing (Durst, 1999; Herrington & Curtis, 2000; Sternglass, 1997). Because many participants had little experience writing extended, academic essays in high school, some were struggling with acquiring writing skills (Severino, Guerra, & Butler, 1997). Because their GC classes were small, they received considerable individual attention and feedback, resulting in what they perceived to be improvements in their writing.

The extent to which students' trajectories were peripheral versus inbound had much to do with participants' modes of engagement with schooling and academic work associated with certain cultural models of the university as an institution. Many of the participants on a peripheral trajectory experienced school simply in terms of "passing" (Prior, 1998, p. 101), involving "procedural display" (Bloome, Puro, & Theodorou, 1989, p. 266) of work without the "deep participation" (Prior, 1998, pp. 102-103) constituted by engaged academic or intellectual participation with instructors. Simply adopting cultural models of being well-organized and responsible for completing work in an efficient manner was a necessary, but not sufficient condition, for opportunities for such deep participation in academic social practices (Harklau, 2001). The fact that Matt obtained a UGTA position or that Jeremy could interact after class with instructors afforded them with a sense of intellectual engagement that fostered inbound trajectories.

For most of the participants, their trajectories were also related to adopting a different set of values distinct from those operating in their home, school, or peer group cultures. Some began to value practices associated with an academic culture and the experience of being a student (Harklau, 2001). Many of the participants were accustomed to peer, school, or family social worlds characterized a "monologic" (Bakhtin, 1981, pp. 353-354)—worlds in which absolutist, authoritative reasoning (Perry, 1981) prevailed. In contrast, the world of GC composition classes valued more "dialogic" (Bakhtin, 1981, pp. 353-354) thinking involving assessment of a range of competing perspectives. Recognizing the limitations of their previous values proved to be developmentally difficult for some participants, because it entailed creating new identities and social relationships to replace the old.

Some participants also experienced difficulty juggling work and coursework, leaving them with little time for on-campus interaction with peers outside their courses, findings consistent with previous research (Astin, 1993; Sternglass, 1997). Although participants were often highly engaged in work associated with a career, some of the social practices valued in workplace worlds did not necessarily transfer to academic contexts.

Participants' trajectories also shifted over time. As some students progressed through the University and the GC program, they began to experience both success and difficulty in coping with college-level work. One analysis of reasons for the relatively low retention rates across the University (Matross & Huesman, 2001) pointed not only to student underperformance, but also, for some, to an emerging disenchantment with the larger University's culture. This suggests the need to understand the aspects of the University culture that may be leading to such disenchantment, in addition to problems with advising, scheduling, or time management.

However, these students also knew that they were on an ambiguous inbound trajectory (Wenger, 1998) between being in a transitory GC program, but still

not having been admitted to the "real" University. This created a sense of stigma (Pedelty, 2001) associated with being perceived in a less-valued unit within the University. Some students found themselves on the defensive and tried to dispel myths that did not match their positive experiences. Others adopted and perpetuated the stereotypes about GC as not a "real college" in a personal attempt to buffer themselves from being stigmatized.

Because many of the participants said they chose to go to a large university over a community college or smaller college, they assumed that a "real" university consists of large lecture classes in which they are treated in a "more independent" and less overtly supportive manner. This notion of enfranchisement or disenfranchisement in the college's mission also took on different tones and emphases across all the students in this study. For example, students sometimes focused on the extra support services and close contact with instructors as not being necessary for them or appearing to be too much like high school as a way of emphasizing why they did not really belong in GC.

Regardless of the reasons students are admitted to GC, a common focal point in their interviews was their eventual transfer out of GC to a degree-granting major in the University. They noted that the courses they were taking in GC, as opposed to community college courses, were more directly linked to transferring to another college in the University. They also reported liking the idea of being on the University campus as a means of becoming involved with the larger University culture; thus, the notion of transfer to the University was perceived as a natural extension and outcome of their work in GC.

However, the notion of transfer also took on a negative connotation for some students, as they described an extended sense of waiting around to get into the "real college," even while holding positive opinions about GC. Maggie stated, "I can now join the rest of the 'real' college." Anna also focused on her transfer out of GC as an important stage in her work, trying to find an appropriate program to take her credits from the college even if it meant going to another college first, just to get out of GC. Brenda also said, "I like GC, but I am ready to move on." Completing a successful transfer to another college in the University became a marker for students in defining another distinct step in their transition into college.

Participants, therefore, experienced a range of different borders and barriers between different social worlds. Some had difficulty knowing how to negotiate these borders and barriers, particularly when the disparities between worlds seemed overwhelming or insurmountable. A number of participants noted that because they were successful in overcoming these borders and barriers, they developed self-confidence in their ability to succeed at the college level. From the perspective of an "intercultural" (Guerra, 1997) model of development, success in higher education has just as much to do with developing agency in negotiating competing worlds as it does in obtaining good grades.

Implications for Developmental Education

The results of this study suggest the need for developmental college programs to explicitly acknowledge and address the boundaries between participants' different worlds, understand the impact of students' prior cultural models, and support individual differences among students' learning trajectories across the institution—with the assumption that the university is a larger community of practice within which students will become either peripherally or more centrally involved.

It also suggests the need for developmental educators to expect some initial resistance from students to being assigned to such programs that may not subside until students recognize the need and value of having a supportive context to help them navigate different worlds. Making explicit the challenges of negotiating different worlds as part of the curriculum helps students understand how they vary their discourses and identities across these different worlds (Durst, 1999; Lundell & Collins, 1999). Instructors can also help students learn to transfer experience with practices across different worlds by making overt connections to their cultural, peer, community, family, and workplace worlds through inquiry-based projects about these worlds (Beach & Myers, 2001; Dyson, 1999).

The advising programs, courses, innovative teaching methods, and assistance in the career planning and transfer process provided by this developmental program enabled many students to make a successful transition to another university program in which they could earn a four-year degree. Courses that provided opportunities for critical thinking, extensive writing and reading, examination of multicultural frameworks, and high levels of challenge were praised as supportive of this transition.

Developmental education programs also need to address the stigma (Pedelty, 2001) associated with being placed in a marked or separate environment on the campus. Participants perceived a disjuncture between the small GC classes and the large lecture classes in other colleges of the University, which they associated with the "real" university experience. This suggests the need for all of higher education to address the often difficult transitions between what can be the highly supportive aspect of developmental college programs and the more impersonal world of the university.

Some of the participants defined their trajectories in terms of long-term vocational goals. Although academics may hope that students formulate their goals in less utilitarian and vocational terms, for these students, these models of future success provide trajectories from introductory courses to a college major and potential career. Although academics may be critical of a vocational instrumentalism as driving students' choices, it is important to recognize that such instrumentalism is a reality shaping and motivating students' trajectories (Durst, 1999).

The results also point to the value of participation in campus organizations or programs as providing students with sites in which they displayed their competence beyond the classroom as valued members of the academic community. Participation in these organizations provided students with a social relationship with the larger university community, and in some cases, provided a more inbound trajectory for students wishing to define a more central point of participation in their college programs and career goals.

Further research on developmental college students' socialization from the perspective of an intercontextual model of negotiation of competing worlds may suggest ways of addressing the challenges facing these students attempting to succeed in higher education.

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African American Men from Hennepin County at the University of Minnesota, 1994-98: Who Applies, Who is Accepted, Who Attends?

David V. Taylor
Bruce Shelske
Jennifer Hatfield
Dana Britt Lundell
General College, University of Minnesota

Results from a complementary quantitative and qualitative study at the University of Minnesota, undertaken by a research team in General College as part of a county-wide study, indicated that Hennepin County African American men who are 18 to 24 years old face specific challenges and successes within the University. Barriers include inadequate high school preparation, difficulty with financial aid, lack of mentors, isolation, and lower graduation rates compared to their peers. Successes in their college transitions include college bridge programs, role models, advisers, student support services, and developmental programs like General College. Recommendations are offered for future research and practice at the University.

Minnesota has long prided itself on providing ample higher education opportunities for its citizens. However, there is a well-documented and growing disparity in Minnesota and nationally between various racial and economic groups' participation in college and technical college (Almonor & Shulman 1997; Ghere, Moore & Schelske, 1999; McGee 1996, 1997; Mortenson, 1997). This study's charge was to determine if participation in higher education at the University of Minnesota–Twin Cities of African American men, age 18 to 30, from Hennepin County mirrors, improves upon, or is behind state and national conditions. This University report was originally part of a larger study produced by a county-wide team of educators, community leaders, health care workers, and policymakers to address issues of disparity for African American men ages 18-24 (Hennepin County Office of Planning and Development, 2002). The full county report is downloadable (available at http://www.co.hennepin.mn.us/opd/opd.htm).

A detailed analysis of University of Minnesota admission cohorts from the mid to late 1990s found that the number of Hennepin County African American Males (HCAAM) enrolled was disconcertingly low. The students' admission and financial aid application information revealed a disorganized or haphazard process, with very few students meeting priority application deadlines. Compared with their peers, HCAAM students had low high school rank and low college entrance examination scores and were often missing expected high school preparatory classes. Two-thirds entered the University through General College (GC), indicating that they had not met the more demanding admission standards of other University freshman-admitting colleges. HCAAM students represented the range of family financial backgrounds from poor to wealthy. About half of the students had parents with prior college experience or degrees.

In terms of academic achievement in college, HCAAM earned lower grade point averages than Hennepin County White male students and were less likely to graduate from the University of Minnesota with a baccalaureate degree. HCAAM students who matriculated into General College were less likely than their GC peers to transfer from GC to degree-granting

programs at the University. However, those who were successful enough to transfer compared favorably with other GC transfer students in terms of persistence and degree completion.

Interviews revealed students who felt isolated and wished they had greater numbers of African American peers, college staff, and especially faculty. College advisers were the source of most support for the students. TRIO programs, such as Upward Bound and Educational Talent Search, were endorsed as critical supports in these students' meaningful access to higher education.

Research Overview

The Hennepin County Planning Office asked David V. Taylor, dean of the University's General College and a member of the African American Men Project steering committee, to develop a model report that would examine the participation of HCAAM in higher education. Dean Taylor convened a team of General College staff led by Bruce Schelske, director, TRIO/ Student Support Services; Jennifer Hatfield, director, Office of Research and Evaluation; and Dana Britt Lundell, director, Center for Research on Developmental Education and Urban Literacy. Each took responsibility for major sections of the report. Graduate Assistants Ho Eriq Duong, Jennifer Schlukebier, and Ira Gertrude Hewapathirana also assisted in gathering and analyzing the data reported.

The team designed a comprehensive review of the experiences of HCAAM to include both quantitative and qualitative data. Quantitative data from institutional databases allowed the team to (a) assess intake and precollege preparation using college admission and financial aid records, and (b) assess outcomes of academic progress through transcripts, which include grades, credits, transfer, persistence, and degree completion. Qualitative data was derived from individual and small group interviews with successful HCAAM students regarding their college experiences, such as what motivated them to persist and where they obtained their financial, personal, academic, and cultural support.

Research Questions

This study asked the following questions about HCAAM:

1. How many apply to the University of Minnesota–Twin Cities?

2. How many attend the University?

3. Which University colleges do they attend?

4. Where did they go to high school?

5. What are their family financial and educational backgrounds?

6. How well are they prepared for University study?

7. How well did they navigate the University admission and financial aid systems?

8. How successful are they in University study?

9. How do they compare to their peers from other demographic groups?

10. What do they say about their college experiences?

Methodology

Five cohorts of applicants (Fall 1994 to Fall 1998) were used in the examination of admission application flow and admission decision distributions. For the purposes of examining outcomes for matriculated students, the decision was made to focus on four admissions cohorts—Fall 1994 through Fall 1997. These cohorts reflect relatively recent admission trends while allowing sufficient time for retention and graduation outcomes. Graduation and retention outcomes were examined as of Fall 2001; hence students admitted in 1997 could be tracked four years from matriculation, and students admitted in 1994 could be tracked seven years from matriculation—customary windows for evaluating graduation.

All students who indicated "male African American" on their University application were selected for inclusion in an archival records analysis. HCAAM were then defined in two ways:

1. Students who graduated from any of the 62 secondary schools (public, private, alternative) in Hennepin County, independent of county of residence at the time of their application for admission. (In this

way we found some students whose precollege education was in Hennepin County but who were living in Ramsey or other counties at application time), and

2. Students whose address was in Hennepin County (including foreign students and GED recipients) at the time of their application to the University, independent of where they went to high school.

It should be noted that the University's admission application contains only a check box for African American, which does not allow for distinctions between African American and recent African immigrants. Therefore, the data includes both groups and cannot be disaggregated.

The quantitative data found in this report were generated from an archival records analysis using three distinct, centralized, historical University databases (i.e., admissions, financial aid, and registration), which were combined for each student.

Concurrent with the quantitative study a qualitative study was designed to identify resources, successes, and barriers in higher education from the standpoint of successful HCAAM at the University. Approximately 20 possible HCAAM participants were identified and invited to join focus groups to discuss a range of questions, including the nature of their high school experiences, college transition, campus and academic life, and the experience of being an African American male at the University.

Two focus groups were held, involving a total of three participants. Semi-structured interviews (45 to 60 minutes in length) were conducted, allowing for open-ended, in-depth responses. Students were also given the option not to respond to questions if they felt uncomfortable answering them. A $25 bookstore voucher was provided as an incentive and compensation for their time. The data was gathered and thematically analyzed.

Archival Records Analysis and Results

Descriptive statistics (i.e., frequencies and measures of location and variance) were used to create a portrait of HCAAM at the University. Application, admissions, registration, and persistence data were also compared between HCAAM and Hennepin County White males (HCWM) who entered the University over the same time period as HCAAM students. In order to control for evident differences in precollegiate achievement between HCAAM and HCWM students (as measured by ACT and high school percentile rank), HCAAM students were also compared to a "weighted" group of HCWM students, created by weighing the HCWM group in such a way as to be comparable to the HCAAM group in terms of ACT aptitude rating (AAR). AAR scores are used by the University in making admissions decisions. AAR is calculated by doubling a student's ACT composite score and adding it to the student's high school percentile rank. It must be noted, however, that this "comparability" is founded strictly on academic variables and does not necessarily account for high school attended, family income, neighborhood, or community.

For both HCAAM and HCWM students, archival data were summarized in several different topical areas as follows:

1. Admissions Applications: All records for undergraduate applications filed at the University between 1994 and 1998 were pulled from the Office of Admissions' database. Number of applications, intended academic programs, and admissions decisions of HCAAM and HCWM were compared. New high school (NHS) and new advanced standing (NAS—new students applying to the University with 39 or more transfer credits) applicants were considered.

2. Admissions and Precollege Preparation: Records from University admissions databases were pulled to examine high school achievement, high schools attended, and dates of application for NHS HCAAM and HCWM cohorts (i.e., students who matriculated into the University fall terms from 1994 to 1997).

3. Family Financial Background and Student Financial Aid Information: University student financial aid data was examined for each HCAAM student with a financial aid record who matriculated to the University between 1994 and 1997. Family financial statements and financial aid awards for the first year were examined. In this report, these data are not available for HCWM students.

4. Academic Performance, Persistence, and Graduation: Records from the University registration database were pulled for each HCAAM and HCWM

Figure 1. Applicant type (new high school vs. new advanced standing) by application term and ethnicity, for Hennepin County males.

Term	Group	Undergraduate Application Type			
		New High School (NHS)		New Advanced Standing (NAS)	
		Number	%	Number	%
Fall 1994	African American	43	79.6%	11	20.4%
	White	680	72.0%	265	28.0%
Fall 1995	African American	55	84.6%	10	15.4%
	White	662	71.3%	267	28.7%
Fall 1996	African American	52	86.7%	8	13.3%
	White	766	76.8%	231	23.2%
Fall 1997	African American	55	85.9%	9	14.1%
	White	794	74.0%	279	26.0%
Fall 1998	African American	75	85.2%	13	14.8%
	White	906	78.0%	255	22.0%

student in the NHS cohort group. These databases provided information regarding grade point averages, credits earned, transfer to other colleges (for students who began in General College), retention, and graduation.

Admissions Applications

Figure 1 presents comparisons between HCAAM and HCWM in terms of application frequency and type. Two groups were identified, including New High School (NHS) and New Advanced Standing (NAS). NHS students enter the University with no postsecondary institutional credits from another institution. NAS students are new to the University with more than 26 semester credits completed at another postsecondary educational institution. In comparison to White males, the African American males were underrepresented among new advanced standing (NAS) applicants over the five years from 1994 to 1998. 15.5% of HCAAM undergraduate applicants were prospective NAS, whereas 25.4% of HCWM applicants were prospective NAS students.

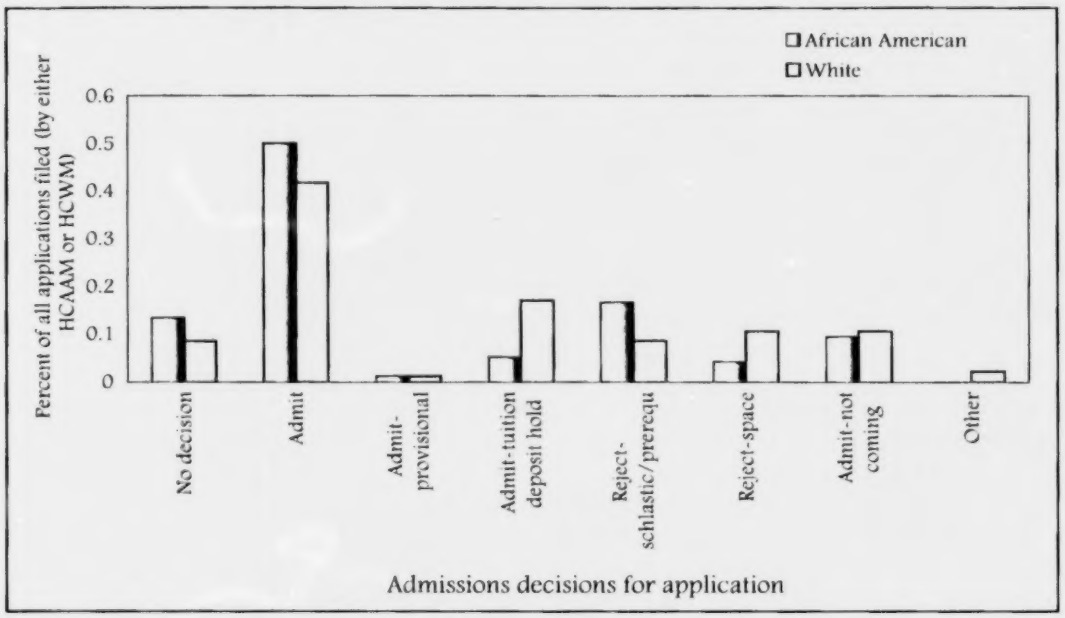
Although students can submit applications to multiple colleges within the University for a given term, it does not appear that HCAAM were any more or less likely than HCWM to have filed multiple applications per term over the five years from 1994 to 1998 (see Table 1.1 in the Web appendix (at http://www.gen.umn.edu/research/crdeul/publications.htm) for data regarding the number of applications per term filed by HCAAM and HCWM).

Figure 2 (and Tables 1.2, 1.3, and 1.4 in the Web appendix) present admission decisions for HCAAM and HCWM applications. Over the five-year period from 1994 to 1998, HCAAM appeared to be somewhat less likely to be accepted to the University than did HCWM: 69.5% of HCAAM undergraduate applicants were accepted into at least one program of application, whereas 76.1% of HCWM applicants were accepted into at least one program of application. This disparity between African American and White acceptance rates has varied from year to year. (See Table 1.4 in the Web appendix for these figures broken out for each application term.) Figure 2 shows that HCAAM applications were more likely to be rejected due to missing prerequisites and inadequate college preparation (i.e., low AAR and missing college preparatory requirements) and somewhat less likely to be rejected due to lack of space.

Attention should be drawn to the relatively small number of HCAAM who submit undergraduate applications to the University; the ratio of HCWM applicants to HCAAM applicants averaged nearly 15 to 1 over the five-year period from 1994 to 1998. However, from Fall 1994 to Fall 1998 the number of HCAAM applicants did increase at a higher rate than did the number of HCWM applicants.

Finally, over the five-year period from 1994 to 1998, HCAAM were more likely than HCWM to apply to—and be accepted to—GC (see Table 1.5 in the Web appendix). During this period, 55% of HCAAM and 33% of HCWM applications were admitted to GC, whereas 7% of HCAAM and 18% of HCWM

Figure 2. Admissions decision distributions for new high school admit applications filed by Hennepin County African American and White males from 1994-1998.



applications were to the Institute of Technology (IT), and 35% of HCAAM and 43% of HCWM applications were to the College of Liberal Arts (CLA).

College Preparation, Enrollment, and Persistence

This section presents data for those Hennepin County African American male students who matriculated into the University as new high school (NHS) admits during fall terms between 1994 and 1997. NHS students who were enrolled as of the end of the second week of their first fall term comprise each of the four cohorts. Where available, comparative data are presented for the NHS cohorts of Hennepin County White males.

How Many HCAAM Students Matriculate Into the University?

After the examination of admissions application data it was not surprising that the NHS cohorts of HCAAM were quite small. Over the four years studied, only 129 HCAAM students were admitted to, and enrolled at, the University. The University consists of many colleges; from 1994 to 1997 five of these colleges admitted NHS students, as opposed to those that only accepted advanced-standing students from other colleges. The 129 HCAAM students matriculated into the three largest freshman-admitting colleges: the College of Liberal Arts (CLA), the General College (GC), and the Institute of Technology (IT). These colleges account for over 90% of freshman admissions. Between 1994 and 1997, 15,361 NHS admits matriculated into these colleges. The 129 HCAAM students accounted for less than 1% of this combined NHS cohort. Both 1994 and 1996 cohorts included fewer than 30 HCAAM students. Because HCAAM students did not matriculate into colleges other than CLA, GC, or IT, any comparisons made with HCWM students will be based only on HCWM students who matriculated into CLA, GC, or IT.

CLA admits the largest number of new students, enrolling from 2,081 to 2,583 NHS students annually over the study period. Students needed a minimum AAR of 110 to be admitted to CLA. During the four-year study period, the presence of HCAAM in CLA

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NHS cohorts averaged 10 students per year, slightly less than 0.5 of 1% of the CLA NHS cohort.

From 1994 to 1997 IT was the most selective (and third largest) new student-admitting college, enrolling from 661 to 718 new high school students annually. During each year of the four-year study period, IT NHS cohorts never included more than two HCAAM, slightly less than 0.25 of 1% of all NHS IT matriculants.

GC is the second-largest freshman-admitting college at the University, enrolling between 691 and 948 NHS admits annually over the four-year study period. GC is the least selective University college, admitting only students who do not meet the more stringent requirements of the other colleges. GC does not confer degrees. It prepares students to transfer to degree-granting colleges. GC's admission floor was an AAR of 70 during the period of this study. GC is also the most diverse University college, with students of color making up an average of 30% of all new admits. GC NHS cohorts included two-thirds of all NHS HCAAM students at the University during the study period, averaging 20 students each year, about 2% of the GC NHS cohort.

From 1994 to 1997, the NHS cohort of HCWM (n=1,419) was 11 times larger than the HCAAM NHS cohort (n=129). Interestingly, when considering the entire cohort of NHS students over this time period, the group of White male students (n=6090) was 17.5 times larger than the group of African American students (n=329).

HCWM students were five times more likely to matriculate into IT (n=347)—the most selective college—compared to HCAAM students (n=6). Twenty-eight percent of HCWM students began University study in GC, compared to 63% of HCAAM students. This means that 72% of HCWM met the more stringent admission requirements of IT or CLA.

How Well Prepared are Students for College Admission and the Financial Aid Process?

The University's priority admission deadline is December 15 of the year preceding the year the student wishes to begin college. Thus, the deadline for the Fall 1994 admission cohort was December 15, 1993. Every student who applies by the deadline and has the appropriate admissions score is guaranteed admission.

HCAAM were less likely than HCWM to have filed applications by the priority deadline. Fifty-three percent of HCWM applied by the priority admission date whereas only 34% of the HCAAM students had done so (see Table 2.2 in the Web appendix). Looking only at students whose applications were late, HCAAM students' admission applications averaged 71 days late. Although admissions spaces are reserved for special populations (including urban students), late applications can cause a host of problems. Late-applying students who are admitted end up at the end of the communication cycle for notifications of admission, orientation dates, and on-campus housing. With late orientation dates, beginning students may not find spaces in appropriate first-year classes. Furthermore, on-campus housing may be full, requiring students to find apartments or live at home and commute.

Students applying late for financial aid are even more problematic. The priority deadline for the best combinations of financial aid is February 15 for the following school year. Thus, the deadline for Fall 1994 financial aid was February 15, 1994.

Only 14% of enrolled HCAAM students applied for financial aid by the priority date. Pell Grants and Minnesota State Grants are like vouchers and follow students wherever they are enrolled; however, institutional aid, Supplemental Educational Opportunity Grants, work-study awards, college scholarships, and preferred-rate loans are awarded first-come, first-served. Late-applying students end up with financial aid awards that have large amounts of loans. Often these students try to work more hours than is appropriate to make up for financial aid shortfalls, and their studies suffer.

How Academically Well Prepared are HCAAM Compared to Other University Students?

As noted above, admission to the University is based on the AAR score (high school percentile rank [HSPR] added to twice the ACT composite score). The resulting AAR score determines applicants' eligibility for admission to various University colleges. Students

Figure 3. Pre-college entry statistics for HCAAM and HCWM NHS students who matriculated into the University between Fall 1994 and 1997.

Pre-college Entry Measure	HCAAM	HCWM	HCWM: weighted
Median high school rank	51	72	47
Mean high school rank	50.73 (n=107; SD=24.32)	67.64 (n=1327; SD=22.87)	48.27 (SD=24.5)
Median ACT Composite	18	25	22
Mean ACT Composite	19.02 (n=108; SD=4.09)	24.82 (n=1331; SD=3.94)	22.49 (SD=4.01)
Median AAR	89	121	89
Mean AAR	89.72 (n=95; SD=27.78)	117.46 (n=1265; SD=27.56)	90.26 (SD=27.93)

needed at least an AAR of 110 to be admitted directly to a degree-granting college during the period of this study. Students whose AAR score did not qualify for the more selective colleges could be admitted to GC if their AAR was between 70 and 110. Students with AARs lower than 70 could be admitted through a special review process that takes into consideration other factors beside AAR, such as special talents, leadership, "late blooming" and so on. After finding that HCAAM students were more likely to matriculate into GC, it was not surprising to find that AAR scores were lower for HCAAM than for HCWM students. It follows that HCAAM students will have lower ACT scores and high school percentile ranks—the two measures that comprise the AAR. Figure 3 presents comparisons between HCAAM and HCWM NHS cohorts in terms of AAR, HSPR, and ACT scores.

HCAAM students began college study with low ACT college entrance test scores. The mean ACT composite score for HCAAM students (M=19.02, SD=4.09) was both below the 1997 national average for freshman enrolled at public universities (M=23.3, SD=4.5) and low in comparison to their HCWM peers (M=24.82, SD=3.94).

HSPR is based upon a student's grade point average at the end of the junior year compared to all other students in the same high school grade. The HSPR is expressed as a percentage. An HSPR of 100 means a student has the highest grade point average in the high school class. HCAAM students average in the 50th percentile of HSPR, meaning they are in the middle of their class in terms of high school grade point average. The average HSPR for HCWM students is 67, with half of the students having HSPRs above 72. It must be noted, however, that the competitiveness and high school completion rates of different high schools confound the comparison between different students' HSPR.

When the HCWM students are weighted to be comparable to the HCAAM students in terms of AAR, it is interesting to note that the mean HSPR for HCWM is somewhat lower than that for HCAAM, and the mean ACT composite score for HCWM is somewhat higher than that for HCAAM. It is possible that these differences could be related to differences in high schools attended by HCAAM and HCWM students. For example, by the nature of the HSPR, any two high school classes will have the same distribution of HSPR even if the high school classes differ in competitiveness. However, the same will not hold true for ACT scores. One would expect that the mean ACT scores would be higher in more competitive high school classes. As a consequence, if HCWM had attended more competitive high schools than HCAAM students, one might expect the pattern indicated above.

Each year, 31 to 53% of HCAAM NHS cohorts were missing at least one year of expected high school coursework. In 1986 the University set the following expectations for high school coursework for students who wish to be admitted: four years of high school English; three years of science; three years of math; two years of foreign language; and two years of social science, one year of which must be U.S. history. When students are admitted to the University without the required number of high school preparatory classes, they must complete the high school preparatory requirements by taking college course equivalents.

HCAAM students were nearly three times more likely than HCWM students to be missing some college

preparatory work upon entry to the University. Specifically, HCAAM were over five times more likely to be missing some precollegiate math; over two and one-half times more likely to be missing some precollegiate science; over three and one-half times more likely to be missing some precollegiate English; and nearly twice as likely to be missing some foreign language (see Tables 2.3 and 2.4 in the Web appendix). Given the difference in admissions profiles between these groups, this finding is not surprising. However, it is interesting that this disparity still remains when controlling for precollegiate achievement differences. When comparing HCAAM students with HCWM weighted so as to be comparable with HCAAM in terms of AAR, HCAAM were still over one and one-half times more likely to be missing some amount of college preparatory work. Specifically:

1. 24.8% of HCAAM students and 11.5% of weighted HCWM students were missing one or more years of precollegiate math.

2. 13.2% of HCAAM students and 10.1% of weighted HCWM students were missing one or more years of high school science.

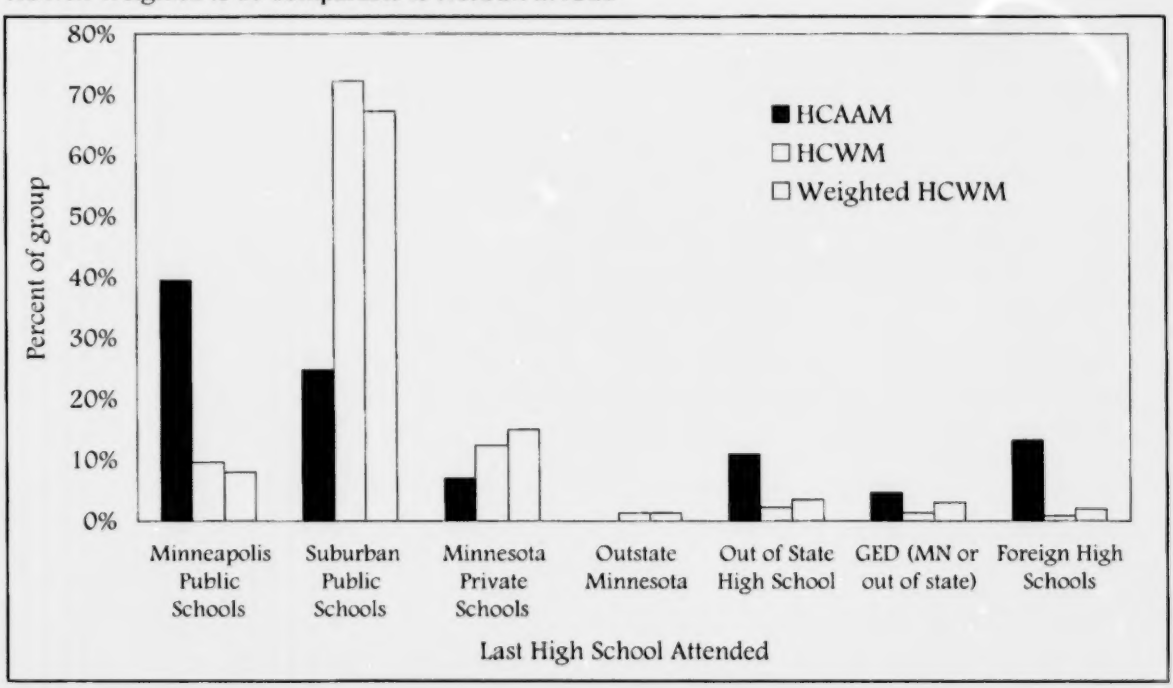
3. 13.9% of HCAAM students and 6.0% of weighted HCWM students were missing one or more years of high school English.

4. 14.0% of HCAAM students and 15.3% of weighted HCWM students were missing one or more years of second language.

Clearly, HCAAM students were entering the University less prepared in mathematics and English than their HCWM peers with similar AAR scores. However, as mentioned earlier, racial group differences in the competitiveness of high schools students had attended could account for some of this achievement disparity between races among students with similar AAR scores. Indeed, it appears that this could be the case because the disparity is greatly reduced when the HCWM group is weighted to be comparable to HCAAM in terms of ACT composite score. However, even when controlling for ACT scores in this manner, HCAAM students were still over one and one-half times more likely to be missing some amount of precollegiate mathematics.

Missing college preparatory mathematics courses is particularly problematic. Although high school

Figure 4. Distributions of Last High School of Attendance for HCAAM, HCWM, and HCWM Weighted to be Comparable to HCAAM in AAR.



preparatory classes in the sciences, languages, and social sciences may be completed by taking college credit courses, high school math preparatory classes are completed by taking college courses that do not count toward college graduation.

Where Did the Students Complete Their Pre-college Education?

The largest number of HCAAM students (n=51) were graduates of the Minneapolis Public Schools, accounting for 40% of the total HCAAM 1994-1997 NHS cohort. Seventy percent of the Minneapolis Public School students matriculated to GC and only one student to IT. While comprising the largest group of HCAAM students admitted to the University, the Minneapolis Public School students were a very small subset of the total African American male population of the Minneapolis public senior high schools. For example, during the study period there were 1,235 African American male students enrolled in 12th grade in Minneapolis' six public senior high schools, yet only 51 African American males from these high schools matriculated to the University.

Surprisingly, the second largest group of HCAAM students (27%, n=34) completed their precollege education outside of the state of Minnesota. The largest out-of-state group had foreign high school diplomas (13% of the total, n=17). An additional 14 students had diplomas from other states, and 3 students had GEDs from other states.

Graduates of suburban Hennepin County high schools (n=32) comprised 25% of the HCAAM cohort. Additionally, three of the six students admitted to IT were from suburban Hennepin County high schools. About 10% of the HCAAM students from suburban high schools matriculated into IT (see Table 2.5 in the Web appendix).

In contrast to the HCAAM students, HCWM students were much more likely to have attended high schools in the suburban Twin Cities area and much less likely to have attended urban Minneapolis high schools. Figure 4 shows that HCAAM were over four times more likely than HCWM students to have come from Minneapolis public schools and that HCWM were over three times more likely to have attended high schools in Minneapolis suburbs. HCWM students were over one and one-half times more likely to have come from private Minnesota high schools. HCAAM students were much more likely to have come from foreign high schools or U.S. high schools outside the state of Minnesota (nearly 16.5 times and five times more likely respectively). These figures remain fairly stable even when controlling for AAR.

What are the Family Income Backgrounds of the Students?

Seventy-five percent (n=97) of the HCAAM students had filed for financial aid. Of these students, 85% were considered financially dependent upon their parents, and 15% were financially independent. The 31 students who had not applied for financial aid were assumed to be dependent since their average age (M=18.8, SD=1.3) was very close to that for the dependent students who had filed for financial aid (M=18.4, SD=1.1). Among dependent HCAAM students, 27.5% came from families with an income below $24,000 per year, 28.5% came from families whose annual income was between $24,000 and $45,000, and 9.2% came from families whose annual income was between $45,000 and $72,000. Family income information was not available for 6.4% of dependent students who applied for financial aid. It was assumed that the remaining 28.4% of (presumably) dependent students who had not filed for financial aid came from upper-income families.

Family income was compared with national family income quartiles from 1996. For example, in 1996, 25% of all U.S. families had an income of less than $24,000, and 25% were between $24,000 and $45,000. Because we can only infer family incomes of students who did not apply for financial aid, and because not all students in the $45,000 to $72,000 family income range would have applied for financial aid, the comparison between HCAAM family incomes and national family incomes is the most complete at the bottom half of the income distribution. The HCAAM family incomes are slightly lower than the national incomes; 27.5% of the HCAAM incomes were below $24,000, and 28.5% of the HCAAM incomes were between $24,000 and $45,000, whereas 25% of the families in the national survey fall into those income quartiles. A reasonable supposition might be that the

HCAAM incomes, while close to national averages, are lower than overall University students' family incomes since the family incomes of college students tend to be higher than average.

What are Student Academic Progress Outcomes?

Grade point average (GPA) is the currency of the University academic progress economy. Grade point average determines who is allowed to continue enrollment, who receives academic honors, and who can transfer to particular majors or upper division colleges.

The GPA of HCAAM students for their first three quarters (one year) averaged near a C+. The first year GPAs of HCAAM students averaged about .3 to .5 GPA points lower than first-year GPAs for HCWM. Compared to the group of HCWM with comparable AARs, HCAAM students' first year GPAs averaged about .1 to .4 GPA points lower (see Figure 5).

However, the *cumulative* GPA for HCAAM students was barely above 2.0—.4 to .6 lower than HCWM comparison groups (weighted and unweighted respectively). Cumulative GPA could be lower for a number of reasons. First, it could be influenced by the performance of stop outs and drop outs, many of whom tend to receive poor grades in college. Second, because two-thirds of the HCAAM students matriculated into GC, it could also reflect what has been coined "GC transfer shock." Transfer shock refers to the lower grades that GC students tend to earn in non-GC courses—courses that they take with more frequency beyond their first year. It is worrisome that the cumulative GPA is so low for HCAAM students in light of the fact that most of these students matriculated into GC and hence must transfer to degree-granting colleges at the University in order to complete their degree. A cumulative GPA of 2.3 was sufficient to be admitted to many upper division majors and colleges at the University, but is well below the requirements for highly selective colleges such as the Carlson School of Management. This low cumulative GPA foreshadows the low transfer rates for HCAAM GC students presented later in this chapter.

How Many HCAAM Students Stay in School at the University?

Retention to the second fall term for HCAAM students (67%) is 11 percentage points below that for HCWM students (78%). However, when controlling for AAR, the difference is reduced to 3 percentage points. The disparity between retention of HCAAM and HCWM students is more marked three years after entry (at the fourth fall term) when only 45% of HCAAM students were still enrolled, whereas 63% of HCWM students showed continued enrollment (a difference of 18 percentage points). The disparate drop in retention from second year to third year for HCAAM students most likely reflects the low transfer rates of HCAAM students from GC to other degree-granting programs in the University. The fact that more students are retained any time two years after entry than are retained fall two years after entry reflects stop-out behavior among students.

Figure 5. College grade point averages for HCAAM and HCWM NHS cohorts.

GPA	HCAAM			HCWM				
					unweighted		weighted	
	n	mean	SD	n	mean	SD	mean	SD
First quarter	122	2.35	1.07	1395	2.85	.85	2.71	.93
Second quarter	112	2.40	1.01	1319	2.76	.89	2.59	.95
Third quarter	108	2.38	1.03	1248	2.71	.93	2.51	.96
Cumulative	126	2.06	.87	1402	2.68	.80	2.44	.84

There are very marked differences in graduation rates between HCAAM and HCWM cohorts (see Figure 7 and Table 2.7 in the Web appendix). HCWM were almost three times more likely to have graduated from the University by fall 2001. Even when controlling for AAR, HCWM were nearly twice as likely to have graduated. This disparity in graduation rates was of the same magnitude for students who matriculated into GC and those who matriculated into CLA or IT. For example, 10% of HCAAM GC students and 20% of HCWM GC students had graduated by Fall 2001, and 23% of HCAAM CLA/IT students and 51% of HCWM CLA/IT students had graduated by Fall 2001. In general, graduation rates for GC cohorts are lower than rates for CLA and IT cohorts. In light of this, it is very interesting that HCAAM students who do not matriculate into GC nevertheless graduate at rates similar to HCWM students who enter the University through the General College.

The GC Experience of African American Men from Hennepin County High Schools (1994–97)

As noted previously, GC enrolls the majority of all HCAAM students. Students matriculating into GC may have unique experiences confounding comparisons with students who did not begin their academic career in GC. For example, GC enrolls less well-prepared students who may have more difficulty adjusting to the demands of college. Furthermore, GC does not grant baccalaureate degrees so students must transfer to degree-granting University colleges in order to progress towards graduation. In general, GC students tend to earn lower GPAs and have lower retention and graduation rates than their peers in CLA or IT.

Figure 6. Retention of HCAAM and HCWM Students at the University of Minnesota.

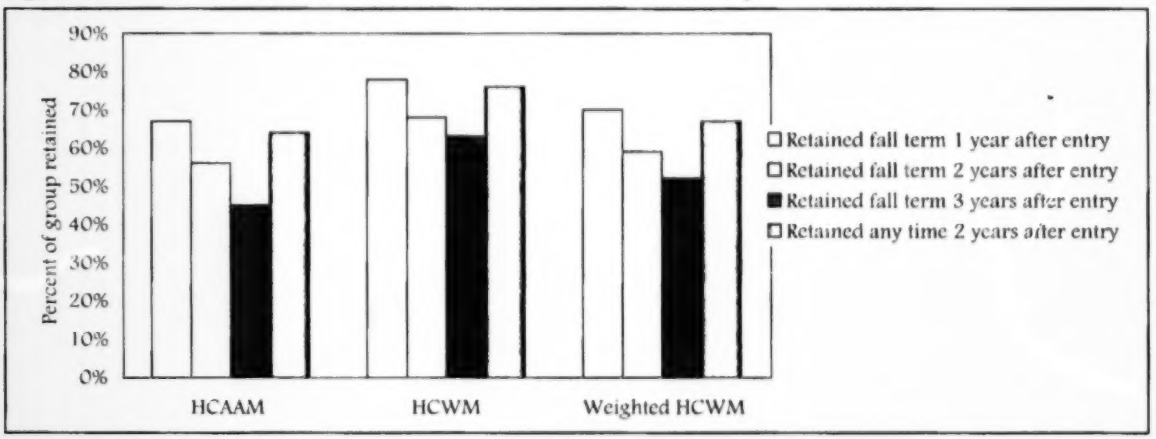
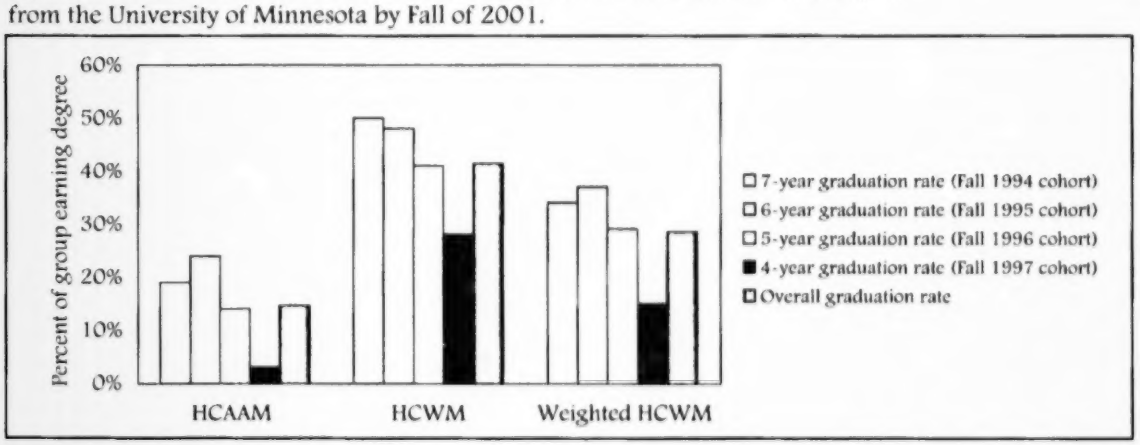


Figure 7. Rates at Which HCAAM and HCWM Students Earn Baccalaureate Degrees from the University of Minnesota by Fall of 2001.



This section examines the precollege preparation, academic progress, and University experiences of HCAAM and HCWM students who matriculated into GC only. Due to the nature of the dataset available, these analyses are based only upon students who attended Hennepin County high schools.

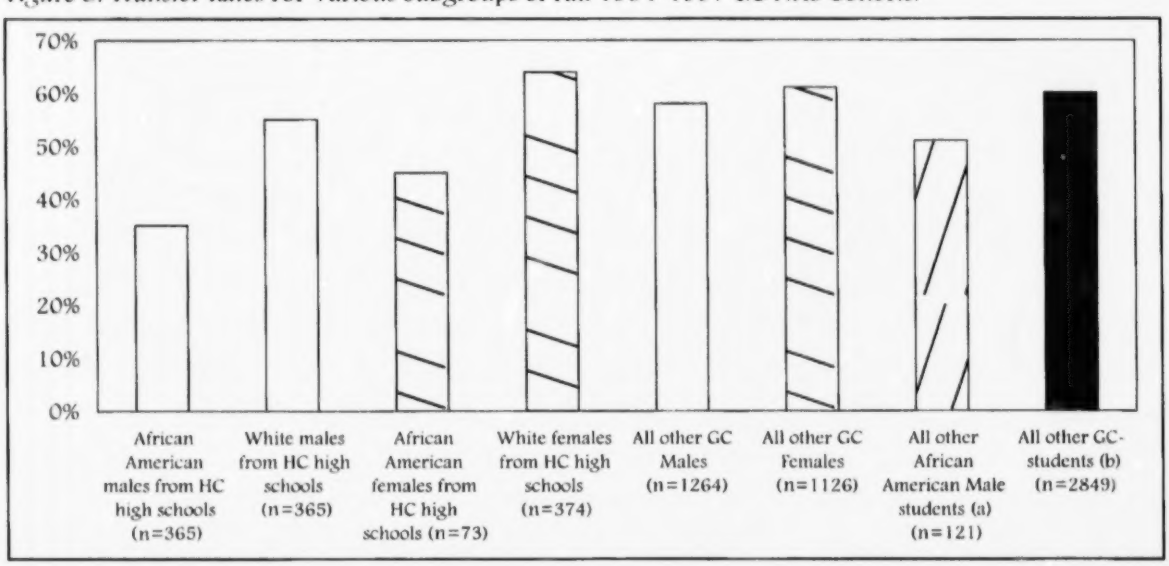
GC African American males from Hennepin County high schools (n=60) came into the college less well prepared than the rest of the GC population. The HCAAM average AAR is barely over the lowest permissible University admission score of 70 (M=74.2, SD=19.2) and is about 8 points below the mean for HCWM students (M=82.5, SD=17.0) and over 10 points below the mean of all other GC students (M=86.3, SD=16.2). GC HCAAM have lower average ACT composite scores than GC HCWM students (M=17.8, SD=3.8 vs. 21.4, SD=3.3) and all other GC students (M=19.7, SD=3.3). However, the ACT composite score for HCAAM students is near the 1997 national average for all African American freshmen enrolled in U.S. colleges and universities (M=17.5, SD=3.7).

The average HSPR of GC HCAAM and HCWM students differ by only approximately 1 percentage point, and are 7 to 8 percentage points (respectively) lower than the average HSPR for all other GC students (M=46.5). High school performance differences were more marked between HCAAM and HCWM when examining high school GPA—this supports the notion that HCAAM students had attended less competitive high schools than the HCWM students (see Tables 3.1 and 3.2 in the Web appendix).

How Successful are HCAAM Students at Transferring from General College to Degree-granting University of Minnesota Colleges?

HCAAM differed markedly from other groups of GC students in terms of cumulative grade point average earned while in GC and percentages who successfully transfer. HCWM students were over one and one-half times more likely than HCAAM students were to have transferred from GC to a degree-granting unit within the University by fall of 2001. Interestingly, African American males who did not come from Hennepin County high schools were nearly one and one-half times more likely than those who came from Hennepin County high schools to have transferred. This disparity in transfer rates is not evident between Hennepin County African American females and non-Hennepin County African American females, whose transfer rates were 45% and 41% respectively (see Figure 8 and Table 3.3 in the Web appendix).

Figure 8. Transfer Rates For Various Subgroups of Fall 1994-1997 GC NHS Cohorts.



It appears that the low transfer rates for HCAAM students is due at least in part to academic difficulty encountered in GC. The mean cumulative GPA earned by HCAAM students while in GC (M=1.96, SD=.95) was below the 2.0 minimum GPA needed to remain in good academic standing at the University. Although the average cumulative GC GPA earned by other African American students (M=2.17, SD=.90) was below that earned by all GC non-African American students (M=2.54, SD=.82), it was still somewhat above the average for HCAAM students (see Table 3.3 in the Web appendix).

Are There Differences Between HCAAM who Transfer and Those who do not Transfer?

Students who fail to transfer have precollege statistics somewhat lower than students who transfer, but they are far below transfer students in terms of cumulative GPA earned while in GC. African American males from Hennepin County high schools who transfer averaged a cumulative GC GPA of 2.76 (SD=.38), and those who did not transfer averaged 1.51 (SD=.87). All other GC students who transfer averaged a cumulative GC GPA of 2.91 (SD=.48), and those who did not transfer averaged 1.88 (SD=.88). (See Table 3.4 in the Web appendix). Only a small percentage of non-transfer students were still enrolled at the University some time between fall 2000 and fall 2001 (8% for HCAAM and 6% for all other GC students), suggesting that most students who do not transfer have stopped pursuing their education at the University.

The very low average GPA for the 65% of HCAAM students who had not transferred and appear to have dropped out suggests that many HCAAM students had academic difficulty while in GC, which quashed their ability to persist at the University. The same statement could also be made for all other GC students who failed to persist and transfer as well.

How Successful are HCAAM who Transfer from GC to Degree-granting University Colleges?

If HCAAM students from Hennepin County high schools achieve well enough while in GC to transfer to degree-granting University colleges, the students' retention compares favorably to all other GC transfer groups. Twenty-nine percent of HCAAM transfer students had graduated by Fall 2001, and 47% had enrolled sometime between Fall 2000 and Fall 2001. This compares very favorably with White male GC transfer students from Hennepin County high schools and all other GC students combined, 32% and 33% respectively of whom had graduated by Fall 2001, and 37% and 30% respectively of whom had enrolled some time between Fall 2000 and Fall 2001. Interestingly, although African American males who did not come from Hennepin County high schools (non-HCAAM) were nearly one and one-half times more likely to transfer than African American males from Hennepin County high schools, non-HCAAM who do transfer were nearly 50% less likely than HCAAM to have graduated by Fall 2001 (see Table 3.5 in the Web appendix).

Qualitative Study Results: Student Voices

Three students—"Quincy," "Robert," and "Alex" (all pseudonyms)—focused on a variety of resources, barriers, and successes in their transitions from Hennepin County high schools to college at the University. Following these student profiles will be a summary of major themes and a discussion of the study's implications.

Profiles

Quincy. Quincy is enrolled in a master's degree program at the University. He attended a private Minnesota college for his undergraduate degree. Prior to college, he participated in a TRIO program, Educational Talent Search (ETS), at his high school in south Minneapolis. He was raised in a single-parent household, with his mother and two brothers. Quincy identified several issues that affected his transition from high school to college, including family support, peer connections, work, preparation for college, resources, and his views on racism and its impact in higher educational systems.

Growing up, Quincy described conflicting messages about the accessibility of education. His family fully supported his educational goals. Quincy's older brother attended college but could not continue

due to a lack of financial resources. Quincy admitted that he hung with "the wrong crowd" of peers at times, which negatively affected his performance in high school. Quincy indicated that he experienced a major turning point as he examined more closely what he wanted to do with his life. Looking around his neighborhood, he related that he really wanted something different for himself from what he saw around him. "I refused to be a nothing...I told myself I had to get out of that [neighborhood, drugs] before it brings me down."

Quincy referred to the TRIO and ETS programs in high school as having provided him with valuable resources for college, creating other life options for him. "TRIO saved my life," he said, noting the exceptional access he had to financial aid, career information, and advising support.

> I owe my thinking about college to ETS... I wouldn't be here if it weren't for those people in TRIO or in ETS that worked in [my high school] and reached out and came to classrooms and told us what they were about, and really reached out to people to realize the opportunity.

He also attributed his success to strong personal motivation and family support.

Quincy entered a private Minnesota college and described a difficult transition that was "socially isolating at times." He experienced "culture shock" and "institutional racism," identifiable by a lack of administrators and professors of color on campus as well as a "lukewarm" campus climate related to race issues. "The sharing of ideas with people from different cultures... I would have to say that those were the big ones [support network and diversity] that [my private college] need[ed]." Despite being an African American male on a predominantly White campus where "no one speaks your language," Quincy said he was persistent and successful academically because he utilized resources on campus to become part of the community, joining a multicultural concerns campus group, and working with TRIO's Upward Bound program.

Overall, he recommended more programs like TRIO to provide opportunities for achievement and access to higher education. Quincy is presently pursuing his goal of becoming a teacher via enrollment in graduate school at the University.

Robert. Robert attended a high school in south Minneapolis, and later, another one in north Minneapolis. He indicated that attending the northside school was a better experience because "North had more Black teachers," and it was where he "really fit in." He received scholarships and good letters of recommendation there and indicated that this was a positive motivation for him to attend and persist in college. Robert believed at the time that the curriculum at both schools was adequate in preparing him for college work. He was in the Upward Bound program, which exposed him to college in high school. He said no one in his family knew anything about college, so this program was very positive in providing him exposure and helping him with financial aid and application forms. This information led him to choose General College at the University.

Robert said that he chose college so he "didn't have to work a regular job that I see people in my family all with, you know, just regular old." Robert viewed a college degree as something that could offer him some more choices in his life. His first two years in college he described as hard because he did not feel his study skills from high school were sufficient for the kind of core courses he had to take. Additionally, Robert lived with his family off campus and was raising his son during college. Financial aid helped him because his family was poor: "Otherwise I couldn't go to college without financial aid." He said he focused primarily on school and on providing food and rent for his son while he did his work at the University. His finances were a bit of a problem, he indicated, because he did not get a big scholarship. He had to write for grants and "little scholarships" to make ends meet. His advisor in General College was very supportive of him, and he noted that this relationship really helped him stay on track with his enrollment and course work.

Although Robert said he had not directly experienced any racism at the University, he mentioned that he would also like "probably more Black people or something at the 'U,' because I mean there's not that many Black teachers here." However, Robert agreed that he would choose the University again, despite his perception that there are always some stereotypes and isolation experienced on campus associated with being an African American student.

Overall, Robert said he experienced many opportunities at the University despite the barriers he experienced with financial aid and isolation, and his worldview expanded through course work and advising networks that provided him with career information.

Alex. Alex attended high school in southwest Minneapolis and then went to an alternative vocational high school. He did not form very close relationships with his peers or teachers. "I kinda kept to myself, did my own thing." After he graduated he took two years off from school before deciding to go to college at the University.

Alex viewed college as a "stepping stone for things I want to do in my lifetime." He lived off campus during college and supported his 5-year-old son. He noted that he did receive some direct support from his advisor in the TRIO program. Alex also found some grants and financial aid to help pay for school, but he primarily described his motivations and means of support as coming from himself. "I said I been on this long path by myself, you know, it's like, I don't want to call myself a loner, but I did what I had to do, and I know what I need to succeed in life." He viewed his son as his motivation for succeeding and persisting in college. "I want him to be able to look up to me and show him and anybody, you know, if I can do it, anybody can do it."

Alex said that there is a need for more African American professors on campus. Alex noted he would even like to attend a Black university for a year just to see what that is like in comparison to the University. "I was raised in the city, and I never experienced a Black teacher, and in college I probably had two, no three, professors in my whole college career at the University." Alex also mentioned that

> the simple fact that being African American, especially being a male, we are, we're living our life on the edge, we're stereotyped every day, we're harassed, I mean I don't care how much education we got, in certain people's eyes we're still labeled as ignorant and naïve and all the downfall names that people apply to us.

Despite this he said he would choose the University again, "and yeah, I would choose being Black again, I love it." Alex also noted the difficulties of supporting himself financially through college, but he indicated that it provided him with many opportunities for success in his future.

Summary of Major Interview Themes

Students reported common themes in their experiences related to resources, barriers, and successes in their transition from high school to higher education.

Resources. Students identified a variety of resources that positively supported their transition from high school to college, including access to financial aid; college-to-high-school bridge programs; affiliation with campus cultural groups; and having supportive high school and college advisors, family members, and teachers. All the students gave strong and repeated praise for precollege TRIO programs like Upward Bound and Educational Talent Search. Students mentioned how these programs helped them identify financial aid opportunities and mentored them through a range of social and academic activities in college, such as finding meaningful campus resources like learning centers, career information, and cultural concerns groups.

Barriers. Students described some barriers in their college transition, including social isolation, stereotypes, financial aid problems, and deficient high school skills preparation. Students discussed the difficulties of being first-generation college students whose families had limited success or essentially no experience with postsecondary education. Financial concerns persisted throughout the students' college experience, such as dealing with financial aid bureaucracies and supporting themselves and their families. They also reported feelings of social isolation, lamenting the shortage of African American faculty and limited numbers of successful African American peers. Although the students reported no overt acts of discrimination, each commented upon the stresses and harassment of dealing with stereotypic perceptions of African American males.

Successes. Students also reported on their successes in higher education, focusing on feelings of accomplishment and increased motivation to succeed, and the development of personal, social, vocational, and academic goals. Student motivation included

increased ambition to better their situations and create an alternative future for themselves. Students reported various motivators and reasons for being in college, such as supporting their children, creating better future opportunities, and pursuing career goals.

Discussion and Implications

Its number of participants limited this study. However, it does reveal some starting points for future conversations and more extensive research. The resources, barriers, and successes these students have identified are important qualitative pieces to add to the quantitative measures of their successes and transitions. We recommend expanding this study, involving more participants, including high school students, in a series of interviews.

Recommendations and Conclusions

Continuing this study should be an ongoing evaluation project of the University of Minnesota, and similar studies should be conducted on other college campuses. Improving realistic access and academic success for this group of students goes to the heart of the University's responsibilities to the community in which it is located and to the duties of a great land-grant university.

The finding with perhaps the most significant implication for higher education policy is the following: there is little ability to predict from admission information which HCAAM students will be successful and which will fail. Therefore, it is imperative that admissions channels to General College remain open if HCAAM students are to be served in significant numbers at the University.

The small numbers of HCAAM students admitted to the University need to be increased. The college application and financial aid application process is fraught with pitfalls for HCAAM students. Substantial collaborative efforts between Hennepin County secondary schools and the University to augment programs of proven worth, such as Upward Bound and Educational Talent Search, which address these processes to include more HCAAM students, should be examined.

The critical importance of first-term and first-year academic performance is clear. However, transition to upper division and major courses in the third year is a stumbling block that requires thoughtful examination. Strong college advising relationships are essential for student success and need to be supported.

Ideas to forge ties between successful African American adults and HCAAM college students need to be explored. Perhaps University scholarships could be delivered through African American adult mentors to help address feelings of isolation and anomie. Are there adult fraternal organizations that would sponsor University student memberships? Could more African American fraternities or service organizations be encouraged?

Overtures to tie larger African American community services to HCAAM students might be explored through helping students with parenting support, health care, employment opportunities, summer jobs, and academic year internships.

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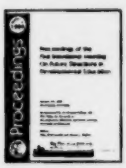

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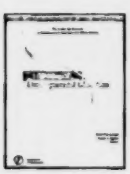

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The fourth monograph will feature theory, research, and best practices related to the role of multiculturalism in developmental education. Institutions of higher education have historically disenfranchised women; people who are gay, lesbian, bisexual or transgender; people with disabilities; and individuals from diverse ethnic, cultural, and socio-economic backgrounds. Many instructors and researchers in developmental education agree that a fundamental goal of the field is to ensure the success of these students who have been traditionally underserved by the academy. Little consensus has been reached, however, on how to accomplish this goal. Dr. James Banks, former President of the American Educational Research Association (AERA) writes, "If multicultural education is to become better understood and implemented in ways more consistent with theory, its various dimensions must be more clearly described, conceptualized, and researched" (*Handbook of Research on Multicultural Education*, 2001). The aim of this monograph, then, is to provide a forum for presenting theory and research on the complex facets of multiculturalism and their role in the field of developmental education.

Articles for this monograph might explore and expand the following questions:

- What is the definition of "multiculturalism" as it relates to developmental education theory, research, policy, and practice? Which theories might contribute to this definition?
- How does developmental education uniquely contribute to undoing institutional racism, sexism, classism, and other forms of discrimination in higher education?
- How do developmental educators conceptualize the process of knowledge construction? How do these theories translate into classroom practice? How can developmental educators ensure that all student voices are heard?
- What are some developmental education students' stories that might illustrate the importance of inclusion in higher education?
- What are some innovative examples of effectively addressing multiculturalism in developmental education, both at the classroom and programmatic levels?
- What student support services are vital to ensure the success of developmental education students, especially those traditionally underserved by the academy?

Submissions (see required form on page 133) must be **postmarked by February 17, 2003**.

Manuscripts will be forwarded to the editorial board for peer review. Authors will then be notified regarding the status of their proposals and receive recommendations and feedback by April 28, 2003. Manuscript revisions will be due by June 16, 2003. The final publication goal for this monograph is Fall 2003.

BEST COPY AVAILABLE

Refer to the guidelines for authors (on page 135) for further information related to manuscript submission. This information is also available online at **http://www.gen.umn.edu/research/crdeul/**

For further information, contact:

Dana Britt Lundell, Ph.D.
Center for Research on Developmental Education and Urban Literacy
University of Minnesota-General College
333B Appleby Hall
128 Pleasant Street SE
Minneapolis, MN 55455
Phone: (612) 626-8706
FAX: (612) 625-0709
E-mail: lunde010@umn.edu

Cover Sheet

Multiculturalism in Developmental Education

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General College, University of Minnesota

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We, the undersigned, agree to have this manuscript published in the CRDEUL monograph, *Multiculturalism in Developmental Education.* This manuscript does not duplicate previously published works or articles under consideration for publication elsewhere. We agree to abide by revision decisions made by the co-editors and editorial board. Signatures of all authors must appear below.

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Submit this cover sheet, 5 copies of the manuscript, and 3 labels with lead author's return address to Dana Lundell, CRDEUL, General College, University of Minnesota, 333B Appleby Hall, 128 Pleasant Street SE, Minneapolis, MN 55455, by **February 17, 2003 (postmark deadline).**

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Multiculturalism in Developmental Education

Center for Research on Developmental Education and Urban Literacy
General College, University of Minnesota

To be considered for publication, manuscripts must comply with the following guidelines:

1. Manuscripts and reference style must be in accordance with the *Publication Manual of the American Psychological Association* (5th ed.). Submissions that do not comply with APA style will be returned to the author(s).

2. Manuscripts must be typewritten, double-spaced, minimum one-inch margins, regular type face/font, preferably 12 point, no right justification. Do not use boldface type or special fonts. Italics are used instead of underlining for titles and emphasis, including subheadings and in the reference list (see APA handbook, 5th edition, pp. 100-103).

3. The subject must be relevant to the monograph theme.

4. Manuscripts must not duplicate previously published works or articles under consideration for publication elsewhere. All authors will be required to sign a non-duplication agreement.

5. The title page must include the title of the chapter (not to exceed 12 words); the name(s) and institutional affiliation(s) of all authors; and the address, telephone numbers (work and home), and fax and e-mail information, if available, for the lead author. All correspondence will be with the lead author, who is responsible for all communication with any additional author(s).

6. The second page should be an abstract of the manuscript, maximum 100 words.

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8. Any information that might identify the authors, such as names and institutional affiliations, must be omitted from the body of the manuscript. Where appropriate, identifying information will be inserted following the blind review process.

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General College
University of Minnesota
333 Appleby Hall
128 Pleasant Street SE
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Signature: Dana B. Lundell

Printed Name/Position/Title: DANA LUNDELL / DIRECTOR, CRDEUL RESEARCH CENTER

Organization/Address: 333B APPLEBY HALL, GENERAL COLLEGE, UNIVERSITY OF MINNESOTA, 128 PLEASANT ST. SE

Telephone: 612-624-8706 FAX: 612-625-0709

E-Mail Address: lunde020@umn.edu

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